

July 1991

The National Locksmith®

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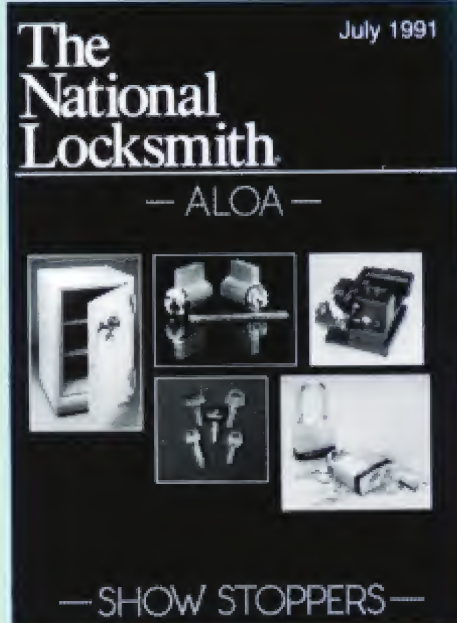
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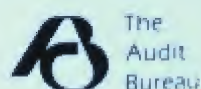


On The Cover
The 1991 ALOA Convention's Product Exhibition will be held in Anaheim, CA, July 19, 20 and 21. Five of the companies exhibiting at this year's show are featured (Clockwise from upper left): Meilink Safe Corp.; Abloy Security, Inc.; HPC, Inc.; Master Lock Company; and Silca Key Services. More product information is featured in our Showstoppers section, page 56.

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Commentary

Selling Security

This month we have introduced several exciting new books. The first is *The National Locksmith Guide to: High Security Safes* by Dave Mc Omie. This book covers opening procedures in great detail with loads of large photos on the toughest, meanest, highest security safes in the world. For more information, see pages 162-163.

Another new safe book is called *The National Locksmith Guide to: Drilling Safes* by Carl Cloud. This book explains everything you need to know to be able to drill open safes. The author tells you what tools and drill bits you need and *how* to drill hard plate. Then he tells you *exactly what to do once you have made your hole*. Carl explains how to view through the hole to open the safe. Plus you'll learn how to defeat relockers and how to scope the wheels through the change key hole. Many of our other books tell you *where* to make the hole, but this book goes on to tell you how to drill it and what to do after drilling. More information appears on page 94-95.

Finally, we have another book called *The National Locksmith Guide to: Picking & Impressioning*. Written by Bob Sieveking, this book teaches you absolutely everything there is to know about how to pick all the different kinds of locks you encounter. Learn about a variety of methods and many tools. Also learn every secret there is to know about impressioning. The author covers each type of lock made, and provides dozens of photos and illustrations that make impressioning easy. Look at page 63 for more information.

A long, long time ago I wrote a Commentary called "Sales Is Not A Four Letter Word." Here it is some years later, and while I realize that many things in our world have changed, I find that when I count the letters in "sales," it *still* is not a four letter word. But then why do so many people treat that word "sales" as if it were to be avoided?

I keep hearing that locksmithing has evolved (or has it de-evolved?) into a service business. Locksmiths simply do not sell more locks than hardware stores. Years ago perhaps folks wandered into the neighborhood locksmith shop to buy a lock, but that aspect of our business has changed. Of course what sets us apart from the hardware store is service.

When I was a kid, if you threw a ball through a window, the hardware store would send out a man in a truck with some

glass and a ladder to reach the second story. Today, the hardware store won't even come out. And if you call a glass company to come out, you better have a couple of hundred dollars in cash handy.

But the locksmith still will come to the house and change the locks, or add new ones, or repair broken ones. But when you are on that call--which you got because of the service you offer--why not attempt to make an additional profit? I am not suggesting that you gouge a customer. Far from it. I am suggesting that when you arrive at the premises, you are likely to find weaknesses that you are easily able to remedy. An old nightlatch can be replaced with a deadbolt. An oddball knobset can be replaced with a modern one keyed the same as the other locks. You might notice a patio door secured by a broom handle. It could be better protected by an auxiliary lock.

The point here is that often the customer calls you for one thing, but can use your services for many other aspects as well. Surely you will be able to add dollars to your bottom line by remembering that as a locksmith you are selling security. That's a pretty damn good product to sell. When you're out on calls, take a little extra time and survey the location. Point out flaws in the hardware and security of the customer.

When you make an additional sale, you profit from extra money. When he makes an additional purchase, your customer profits from enhanced security.



Marc Goldberg
Editor/Publisher

July 5

Letters

Comments, Suggestions and Criticisms

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length. Please address your comments, praise, or criticism to Editor, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107. All letters to the editor must be signed.

Ladies Angered At Unprofessional Seminar

Dear Marc:

I just had to write to complain about a seminar held by another organization in Louisiana. The two instructors apparently didn't realize that about seven or eight ladies were present because every other word out of their mouths was a curse word. There was no need for the excessive profanity.

One instructor talked about the locksmiths not getting the respect they deserve for one reason or another. The other instructor kept repeating "Hey dude, money, money, money is the name of the game." I thought security and professional workmanship for our customer was the name of the game.

To top this so-called educational seminar off, a locksmith from Texas asked about how do we compete with the discount stores by having our prices higher and still stay in business. Both instructors told him not to let the competitor dictate his prices and to

charge what he thought his work was worth.

The locksmith became agitated and all three were screaming at each other and it got out of hand. The locksmith left angrily after being called stupid and crazy.

I had intended to buy some of the products offered by these instructors, but when we found out that they are doing so well with the hardware stores, we decided to let them sell their products to the hardware stores, and I will never attend any classes by either one of these instructors again.

They want to think they are doing this for the good of the craft, when in fact, it is strictly to promote their own business products.

Gayle Parker
Louisiana

Australian Subscriber Wants Better Wrapper

Dear Marc:

As a subscriber to your magazine, I have been very lucky to receive the magazine in one piece. Every month the envelope wrapper has been badly torn in the mail. This is the second time that I've placed a complaint with your company regarding the above matter but it is obvious that nothing has been done regarding changing the wrapper so that it could handle the shipping from

America to Australia.

I've had enough, so I've decided to send you back the wrapper which came with the December edition of *The National Locksmith*, so that you can see it with your own eyes.

I would appreciate it if you could change the wrapping to something different that it could handle the distance, and all knocks it must receive travelling in a mail bag.

In your Editor's Note on page 12 of the December '90 edition you mentioned that your magazine contains sensitive security information which I agree with, however any person who has a deviant mind could have looked through this edition which I just received and all previous editions without me knowing about it because of the condition of the wrappers.

Marc, this is a security risk so how about looking into changing the type of wrapper that you presently provide with something that can withstand the handling it encounters in Second Class Mail.

Alex Pawloff
Australia

Editor's Note: Boy Alex, that envelope really was torn up badly. Now that we are working closely with Locksmith Supply Company of North

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Continued from page 6

Melbourne, we have even more Australian subscribers than ever. I am now researching to find a tyvek or mylar envelope considered to be practically indestructible. Thanks for writing.

New Locksmith Career Advice

Dear Marc:

I am a new subscriber to your fine magazine and have a rather strange but maybe common problem that I hope

you may be able to help me with. I am forty-six years old and currently in the insurance business. I am also a recent graduate of the Foley-Belsaw Institute of Locksmithing. Being a novice at my age, I really don't know where to go from here.

I initially thought that getting into the business wouldn't be that difficult and my courses would equip me to handle the more common problems. However, after reading several issues of your magazine, I am all at once overwhelmed at all of the information and knowledge still left to learn. I

realize that to be proficient at picking, reading and impressioning takes time and practice but there also seems to be much more than that to assimilate.

Many of your articles mention locks, closures and methods that I haven't yet been exposed to and don't quite understand. I guess this is probably "normal" for a novice but its also a little frustrating since I really enjoy locksmithing and would love to get involved in it much more than I already am.

At this stage in my alternate career (I'm still in insurance for the time being), what in your opinion should be my next move? I don't know enough to go out on my own yet (which I would like to do) or be hired by a locksmith company.

I would really appreciate any help and suggestions which you might have considering your position in the industry. Thank you.

John G. Stepaniak
Pennsylvania

Editor's Note: Well John, your question is one commonly asked by folks newly trained in locksmithing. You need experience yet you don't have enough experience to be hired in a shop. I think the answer is that learning locksmithing is a long process of self-help.

You have already embarked on your journey by taking your course and by reading this magazine. Read everything you can get your hands on. Examine all the locks you come into contact with. My grandfather was president of a lock company when I was a child. I recall that he could not pass a lock without stopping to look at it. You do the same.

There are a variety of associations which you can join as a member. Then you will have access to the tradeshow where you can see lots of material on display. Plus they offer hands-on training classes to teach you more. Just make it your goal to learn a little bit each day, and soon you'll gain that experience.

Contact ALOA (Associated Locksmiths of America) for the chapter nearest you, (214) 827-1701, 3003 Live Oak St., Dallas, TX 75204.

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Reader Responds To 'Secret Codes' Commentary

Dear Marc:

I just received the May issue of *The National Locksmith* and I had to take computer in hand to write to you. I never got past the Commentary reference to "secret codes."

My story begins back in the fall of 1988 when my wife ordered a new mini-van from our local car dealer. We have been purchasing vehicles from this dealer since 1970.

Upon receipt of the new vehicle, the salesman presented my wife with two keys, both of which went into the ignition. I inquired as to the key for the storage cabinet under the passenger seat and was told that it must have been lost in shipment, but not to worry. They would contact the factory and have a key shipped immediately. (The key machine at the dealership was broken and they were not going to fix it.)

From November through April my wife stopped by the dealership periodically to inquire about the key and kept getting the run around. I stopped in one day and spoke to the manager and inquired as to the problem. He stated that he didn't know, but since I was a locksmith why didn't I just cut a key and they would pay for it.

Well, I proceeded to do just that after which I made up my bill. It may have been my wife's car, but the dealership contracted for the key so I priced accordingly. The total bill came to \$51.68 including tax, and I dropped it off the next day.

The following is a note received from the Manager: "Enclosed please find receipt of invoice #1018. The prices on it seem quite high. I'm hoping some day to do business with you, however our customers would never pay these prices. If you could pass along to your wife that the next time she comes by to stop in and the local hardware store can make her keys for \$1.25 each. P.S. I hope you're just kidding, right?"

Wrong! Even though I am a small business located in a rural area of South Central Pennsylvania I feel my prices are very reasonable.

Since this episode, both my wife and I have returned to the dealership strictly for emergency service work and it is

doubtful that we will ever purchase a vehicle from that dealer again.

Dennis W. Emmel
Pennsylvania

Reasons For Opposing Locksmith Legislation

Dear Marc:

I am opposed to any legislation (federal, state or local) for locksmiths. It will not help the public and only hurt the locksmith.

Being regulated does not make one a

professional, nor does simply being a member of a national association. How can a piece of paper or a plaque on a wall make anyone a professional?

Professionalism comes from being well trained and doing quality work and being honest with your customers by not selling them goods and services they do not need for their particular situation.

However, I do support legislation restricting the sale of picks and Slim Jims to locksmiths and law enforcement

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Enter the 1991 Technitips Contest

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Silca's Club Jr.

This easy to operate key duplicating machine makes the popular Laser-Sidewinder auto keys. It also duplicates various automotive and commercial high security keys.

Second Prize



HPC's One Machine

The One Machine is a semi-automatic, durable and accurate duplicating machine designed to cut several hundred keys per day, effortlessly. It cuts standard cylinder keys, plus most foreign automotive keys.

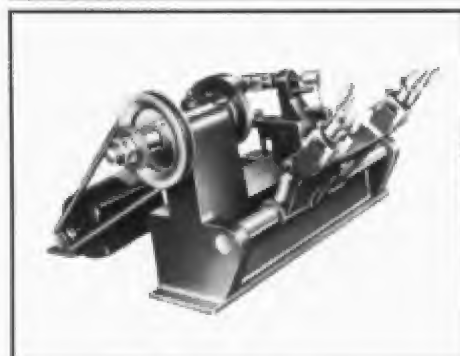
Third Prize



ESP 660

The model 660 key machine can be used for manual cutting or, with the flip of a switch, it will cut keys automatically. It is designed to accommodate large head keys such as hotel and foreign auto blanks.

Fourth Prize



Belsaw 200

Duplicate, cut by code, cut flat steel keys. Complete machine with motor, three cutters, guides, and instructions. Built-in micrometer.

Fifth Prize



HPC 9120

HPC's newest and most compact key cutting machine features reversible jaws. Double-sided copy dog cuts flat steel and safety deposit keys and has softy brush. Excellent versatile machine.

Sixth Prize



\$100 Cash & Flat Rate Manual

\$100.00 in cash will brighten your day! So will the *Flat Rate Manual for Locksmiths*. The manual will help you price your services for profit. You won't ever have to guess how to price again.

Code Books From *The National Locksmith*

Seventh Prize



General Code Book Set (NGCB)

These three books contain 450,000 codes covering domestic lock and automobile codes.

Eighth Prize



Padlock Code Book Set (NPCB)

These three volumes offer 462,000 covering Dudley, American (Junkunc), Master and Yale.

Ninth Prize



Foreign Code Book Set (NFCB)

This two volume set holds 432,000 codes for the complete variety of foreign codes, from Alpha Romeo to Yugo.

Technitips

Helpful Hints from Fellow Locksmiths



Send me your Technitips. Who knows, you may be our next winner! c/o The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107.

by Robert Sieveking

Congratulations to all those who find their Technitips printed here this month. Your contributions are greatly appreciated. Originality, in a Technitip, is a very important point. Many of the Technitips I read are very original. Some I fear, are not as well thought out, tried, or successful as the writer might believe. In some cases, tools are available, that can make your work easy. Some locksmiths, however, are reluctant to invest in good tools.

If you're going to be a professional locksmith, invest in a few "locksmith" tools. Proper car opening tools, for the professional, do not include butter knives, coat hangers, or steel welding rods. Indeed, you can roll up a common playing card and use it as a plug follower, to recombine a lock cylinder, but who would want to? I must have fifteen different plug followers on my truck. If I leave the shop "unprepared"

Win a VATS Decoder From All-Lock!

Each month, All-Lock will award one of their A-7000 VATS Decoders and an A-7001 Adaptor to the best automotive Technitip submitted this month. If you would like a chance to win a free decoder and adaptor from All-Lock, simply submit your automotive tip exclusively to *The National Locksmith*. Tips submitted to other publications cannot be considered.

All-Lock's A-7000 makes it easy to diagnose system failures, service the column and select the correct key blank. This sophisticated tool is easy to use and is completely portable. Long wire leads are easy to use in cramped automotive situations.

Submit your tip, and win today!



to do the work, the professional thing to do would be to go back to the shop for the proper parts or tools to complete the job. If there is only one "special tool," and it bounces back-and-forth between the service vehicle and the shop workbench, then invest in a second tool and save yourself the trouble and possibility of forgetting.

Next time you're in a discount store, buy a new "set" of screwdrivers, and throw away some of those blunt, round nosed relics you picked up at the garage sale

down the block. Put a mirror on the wall, near the door you use to get to your truck. Get a full length mirror, and place a sign above it, that reads, "Would you let this man have the keys to your house and car?" Go to the ALOA convention. Take a class or two. Buy some new tools. But above all, "Enjoy." Locksmithing is a fun and very rewarding trade. See us at The National Locksmith booth, and I'll show you a few books that will make your locksmithing a lot easier.

How To Enter

All you need to do to enter is submit a tip, covering any aspect of locksmithing to *The National Locksmith*. Certainly, you have a favorite way of doing things that you'd like to share with other locksmiths. Why not write it down and submit it to: Robert Sieveking, Technitips' Editor, *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107.

Tips submitted to other industry publications will **not** be eligible! So get busy and send in your tips today. You may win cash merchandise, or even one of many key machines or code book sets! At the end of the year, we choose the winners of the listed prizes.

Last year dozens of people walked off with money and prizes. Wouldn't you like to be one of the prize winners for 1991? Enter today! It's a lot easier than you think!

Every Tip Wins 'Locksmith Bucks!'

Yes, every tip published wins a prize. But remember, you must submit your tip to *The National Locksmith* exclusively. Each and every tip published in *Technitips* wins you \$25.00 in Locksmith Bucks! Use this spendable cash toward the purchase of any books or merchandise from *The National Locksmith*. You also receive a Bonded Locksmith bumper sticker and decal. Plus you are now eligible for the really big prizes!

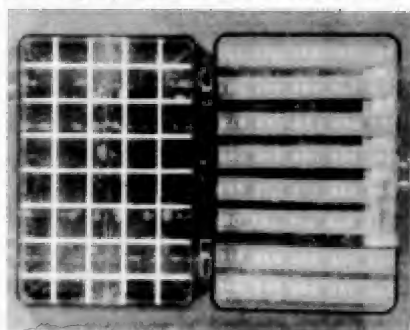
Best Tip of the month prizes!

If your tip is chosen as the best tip of the month, you will win \$50.00 in cash as well as \$35.00 in Locksmith Bucks! Plus you will receive a quartz Locksmith watch, a Bonded Locksmith bumper sticker, decal and a Locksmith Cap. Plus, you may win one of the annual prizes.

July's Best Tip

The locksmith trade is primarily a service oriented trade, but we need hundreds of little "bit" parts, to easily repair the multitude of different locks we face every day. Organizing and keeping those tiny parts handy, and "mobile" is not always easy. I've made a number of kits with small Plano micro-magnum fishing tackle boxes.

A very serviceable small pin kit, shown in photograph one was made from a small plastic tackle box and a piece of fluorescent light diffuser grid. The reverse side of this box opens to find a plug follower, tweezers, shim



1. Pin kit made from a tackle box.

holder, a few cut keys, and small screwdriver. This is a very handy kit, indeed, everything you need to service a cylinder or two, fits right in the palm of your hand.

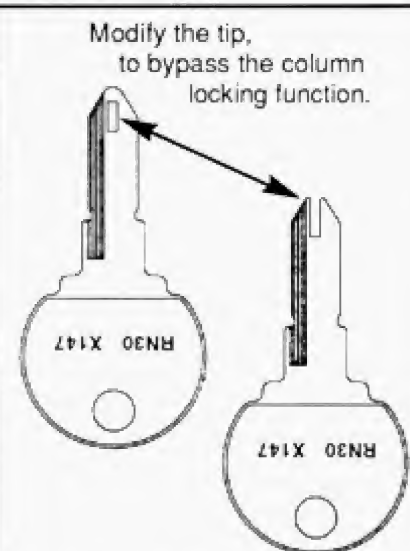
The larger plastic boxes, might be stocked with a wide assortment of foreign automotive keys, as an extension of your overcrowded keyboards, but don't forget to keep a written "list" of the keys contained in each box for locating the keys.

Casimier Cherry
Michigan

Automotive Tip of the Month

This tip is the winner of the All-Lock A-7000 VATS Decoder and the A7001 Adapter. All-Lock will award this package to the best automotive tip each month of the year.

This Tip concerns a method I have found, to make an ignition key for those Renaults and Peugeot autos which use the Nieman ignition cylinder. If the door and ignition use different keys, impressing the cylinder, or picking the lock to gain access to the ignition code used to be the only method I used.



Emergency temporary repair, for a Renault/Peugeot ignition, using the X147 key

Illustration 2

Because both of the above methods are fairly difficult, I have found an easier method. This method is to simply shim the ignition plug from the front, to release and remove the cylinder far enough to read the ignition cylinder

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code.

Remove the "anti-rattle" screw from the ignition cylinder, and use a standard shim and hook or diamond pick to pick the ignition cylinder. Slide the shim into the shear line, from the front, as you lift the combining pins in sequence, from the front of the cylinder to the rear. When all pins have been picked, the plug can be turned to the arrow, between the "accessory" and "on" positions, to depress the retaining pin. Remove the ignition only far enough to read the code number/letter group. If you slide the shim all the way in, but

are unable to rotate the plug, you may have to depress the key alarm contact. (This is for cylinders using the RN 30 or X147 key.) Don't forget to pull the contact back out, after replacing the cylinder.

A common problem with these ignitions is for the finger, which engages the key through the square hole at the tip, to become worn. When the key is removed from the ignition, the finger is not pulled "completely" out. When the key is replaced in the ignition cylinder, the finger is pushed "ahead" of the key, instead of engaging the hole as it should, and is pushed to the rear of

the keyway. With the finger at the rear of the keyway, the key cannot enter far enough to solve the lock and turn the plug. The simple solution, is to pull the finger to the front of the lock, with a hook type key extractor.

This solution solves the immediate problem, but not the cause. If it happens again soon, the locksmith might not be available, to easily reset the mechanism. As a makeshift or provisional repair, the key can be modified as you see in illustration two. The tip of the key has been filed to allow the interlocking finger of the mechanism to be bypassed. This will guarantee that the car can be started and driven until a new ignition lock can be ordered and a permanent replacement ignition installed.

Timothy Chrisman
Virginia

Editor's Note: With the tip of the key modified, as in illustration two, the column locking function will never be activated. This seriously effects the security and safety of the vehicle. This modification is not good practice. It may even carry some type of "projects completed" liability. Have your customer sign your receipt, stating that he or she understands the problem and either does or does not want the repair completed.

Collect a deposit on the parts, if they are ordered. I still have an expensive new ignition, that a customer didn't pick up or have installed. This was because the wait for these French parts is so long, and the parts deposit was too small. The deposit should be at least equal to your cost on the part.

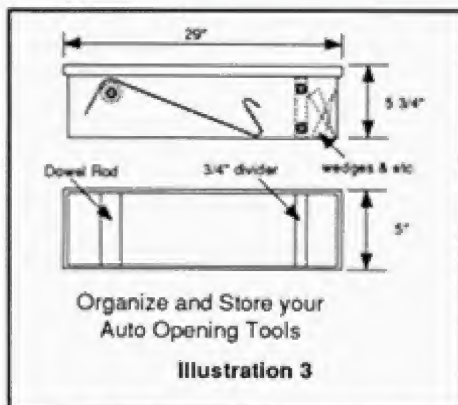
Storing the many car opening tools needed to open the number of different autos we are called to open is becoming a major problem. The tangled mess prevents quick identification of the proper tool, or easy removal from the tangle. The tool organizer shown in illustration three has solved the problem for me.

It was made from an inexpensive heavy plastic potting box purchased at the local discount store. A 1" dowel rod was fastened across one end of the box, as shown, allows the tool handles to be raised conveniently off the bottom of the box. If the tool handles are color coded, as many are, the colored handles will be much easier to locate this way. A 3/4" wood divider is mounted across the opposite end of the box, to make a handy bin for smaller tools mini manuals and wedges. Drill through the



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side of the box, and secure the dowel rod and dividers with small wood screws.

The box is small enough to fit easily behind the seat of your truck, and will keep all those specialized tools neat and handy. If you change vehicles, to do a quick night call in the family car, just grab your opening box and a flashlight; you'll have everything you need. Don't forget your receipt book!

Greg Modders
Michigan

Servicing locksets mounted in commercial hollow metal steel doors can be difficult when the threads become stripped, in the metal latch mounting ears. The deadlatch or mortise lockset loosens and will not remain tight in the edge of the door. A quick and easy method of securing the lock or latch, is to "pop-rivet" it in place with the appropriate size rivet. Use steel rivets; they are harder, and will wear longer.

William Weaver
Georgia

This Tip concerns a simplified method of removing the in-dash ignition from a 1984 Audi. The lock case housing is behind the dash. This would normally require the removal of the gauge cluster, to access the housing to remove the ignition cylinder. With the gauge cluster removed, an ice pick would be used to pierce the housing, at the location of the flat spring cylinder retainer, and depress the retainer. Removal of the cylinder is easy, once you locate the retainer. Removing the gauge cluster, to locate the retainer is not easy.

By removing the soft rubber ring, which surrounds the ignition cylinder, you will find the hole in the dash just large enough to manipulate the tip of your Dremmel tool to open the raised portion of the cylinder housing that

conceals the cylinder retainer. A ball type high speed steel cutter, applied to the raised area of the housing, located about the 10 o'clock position behind the face of the cylinder, will cut through the thin metal to allow access to the retainer. Use a right angle probe, made from a pocket screwdriver to depress the retainer and allow the cylinder to be removed. The hole in the housing can be repaired with epoxy filler material.

Be very careful with the hand grinder near the dash. Wear safety glasses. Your sight is a non-renewable resource.

Victor Lindamood
Texas

If you have loosened the mortise cylinder retaining screws of a lock mounted in a thin stile aluminum frame, but are still unable to unscrew the cylinders from the lock case, try loosening the lock case mounting screws. This will allow the lock case to move in the door slightly, freeing the stuck cylinders. In some cases, the lock is retained in the door by the cylinders alone.

Alignment of the lock is accomplished by set screws that push the lock case out (toward the edge of the door), against the cylinders. The alignment screws must be loosened to remove the cylinders from the door.

Continued on page 21



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Always tighten the lock mounting/alignment screws, to prevent anyone unfamiliar with the construction of the lock from removing the cylinders. Simple removal or loosening of the cylinder set screws will not release the mortise cylinders from the lock or door frame.

T.R. Taylor
Colorado

Sometimes it seems like you need three hands to open a vent window on some of the new trucks and vans. One hand to turn the handle, one to depress the lock button, and one to apply pressure at the edge of the window to relieve the pressure of the weather strip. Trucks and vans that have the triangular vent window at the front of the front doors are no problem to open, if you can unlatch the vent window easily and without damage.

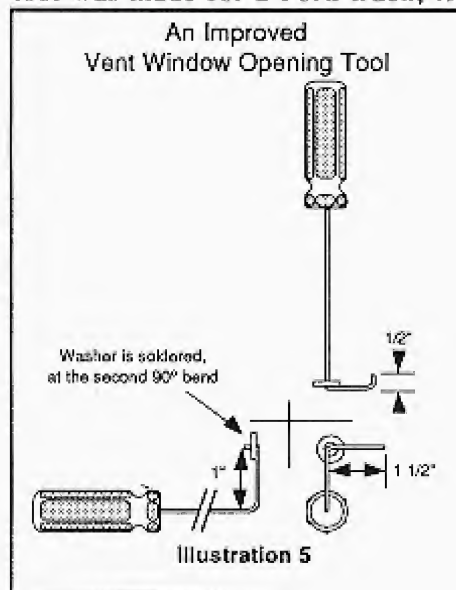
The "triple L" tool, shown in photograph four will allow you to open the vent window with one tool, freeing your other hand to apply pressure to the window edge. A 1/4" washer, soldered



4. The triple L tool.

to the second 90 degree bend makes it easier to apply pressure to the button, as the tip of tool lifts the vent window latch arm to unlock the window.

Illustration four shows the correct dimensions for the tool. Though this tool was made for a Ford truck, it



should work equally well on most auto vent windows. Don't forget to lubricate the tool and weatherstrip with windshield washer fluid or a liquid soap solution. Always wipe the window and weatherstrip dry when you're done.

R. Lazich
Wisconsin

I purchased a new set of *National Locksmith Code Books* recently. To keep them handy in the truck, but protect them at the same time, I made a closed book case in the van. The front of the closed book case is hinged at the bottom, so it drops down to make a convenient reading shelf. This allows

the book to be at an angle for easy reading. By placing the pages of the code books in the binders "upside down," the books need only be tipped out of the case, onto the reading shelf, and opened. The binders read right side up when on the shelf, and the book pages are right side up when tipped onto the reading table. This saves turning the books around each time they are removed.

Juanita Ramsey
Texas

I would like to share a Tip concerning the Ford 10 wafer sidebar ignition lock. I'm sure that most

Continued on page 167



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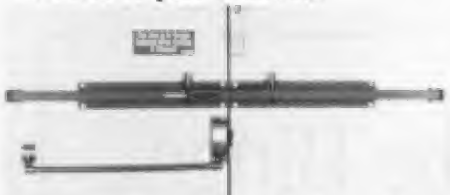
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Newsmakers

New Products and Industry News

Norden Lock Introduces Double Door Lock

Norden Lock Co., Inc. introduces the new Norden Lock for use on double doors without center posts (mullions).



The Norden Double Door Lock creates a solid connection from frame stop to frame stop. It is fully adjustable from a minimum of 5' to a maximum of 8'. The Norden Double Door Lock is adjustable for standard stop depths.

The easy installation of this lock facilitates assembly on the job site for either

left or right passage doors, and is lockable in both the open or closed positions.

Circle 397 on Rapid Reply

AWI To Hold \$25,000 Drawing

AWI, a division of Abloy Security, Inc., will hold the drawing to determine the winner of its 25th anniversary \$25,000 giveaway during the 3-day Associated Locksmiths of America (ALOA) Convention in Anaheim, California.

AWI, in conjunction with its 25th anniversary, will give away the \$25,000 prize to a locksmith during the 1991 ALOA Convention, being held July 19 to 21. To have a chance to win, a locksmith must have registered for the AWI Quarterback Rebate Program. The

rebate program, which will continue after the convention, allows for a 25-cent rebate on any AWI or Convert-A-Lock cylinder, with at least ten proofs of purchase.

AWI also is introducing two new, key-in-knob lock cylinders at the convention, the all new Convert-A-Lock 8800 model and the 8810 model. The brass cylinders feature precise pin spacing and key-cut dimension, which match those of original manufacturers, so that they can be used in existing master-key systems. Both are available in 20 popular keyways, as well as a variety of keying configurations.

Circle 396 on Rapid Reply

Continued on page 24



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Continued from page 22

Transparent Envelopes Now From McGunn

Color-tinted, transparent plastic cash envelopes are now available from McGunn Safe Company. The new, reusable, clear plastic envelopes were suggested by customers because they eliminate paper cuts and are stronger and easier to use than paper envelopes. Managers can verify the contents more quickly and spot bills that have become



lodged in an envelope.

The color-coded system provides shift accountability and cash control in a retail operation. Each employee or shift is provided with a supply of envelopes which correspond to a matching color cash drawer on the store's drop safe. As cash is skimmed from the till, it is placed in the envelope

and dropped into the appropriate drawer.

The green, blue, and red clear plastic envelopes, provided free with McGunn's popular Cash Handler IV safe and the new, currency-vending Cash Controller, are available in lots of 20 each.

Circle 398 on Rapid Reply

Lund Key Control Catalog

Lund Key Cabinets featuring visible key control are described in the new 16 page catalog. New products shown are a key cabinet with a locking inner compartment and a locking exterior door, a dual lock key cabinet for extra security, and a locking storage cabinet. Prison key cabinets of all sizes are also included.

Lund makes over 70 different styles of key cabinets and panels, all complete with systems for controlling keys. Capacities range from 10 hooks to 3312 hooks. The system can be one tag or two tag.

Circle 399 on Rapid Reply

Dugmore & Duncan Expands Yale Line

Dugmore & Duncan announces a major expansion of their Yale Lock Co. products inventory. Included in this expansion is Yale's new cylindrical lever set designed to accept the removable cores of Best, Falcon, Arrow, and other similar types.



This welcomed addition to Yale's product line will enable customers to continue using their present keying system in situations where traditional knob style cylindrical sets must be replaced with levers in order to comply with handicap codes or in any case where a lever is desired.

Dugmore & Duncan is also stocking a version of this Yale lock designed to accept a standard (non-removable) Schlage cylinder by using an adapter kit included with the lock.

Circle 400 on Rapid Reply

Major

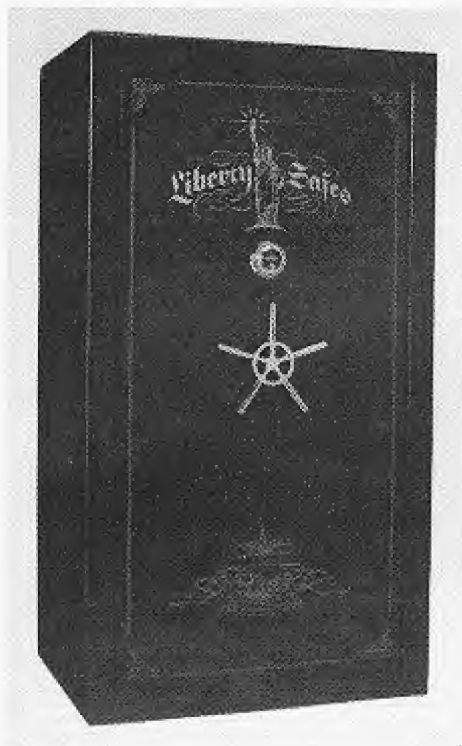
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The Presidential Series From Liberty Safe

The Presidential Series features a body molded from 1/2" thick steel into a strong seamless exterior, plus double-wall construction, with the inner wall consisting of UL-listed fireboard. The



1" reinforced door is fully recessed to prevent prying. The gear-drive mechanism is guarded by the shear-pin protection and extensive hardplate.

Other standard features include up to 22 1" locking bolts, including multiple top and bottom locking bolts, 24-karat gold-plated dial and handle, and over 1500 pounds in weight.

Circle 401 on Rapid Reply

Free Tool Cases From Master Lock

To celebrate the 70th anniversary of the laminated padlock, Master Lock is offering locksmiths a free 16" or 18" steel tool case. Locksmiths will receive the free tool case with a qualifying purchase of Master Lock and Dexter by Master Lock products. Orders can be placed after July 1, 1991.

Both Master Lock and Dexter by Master Lock offer top-quality security products that are made in the U.S.A.

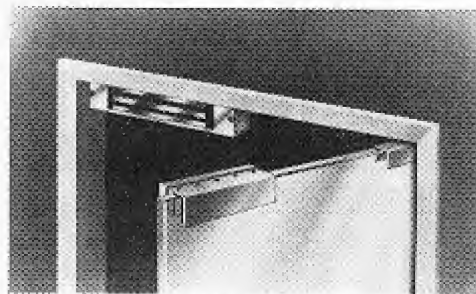
Circle 402 on Rapid Reply

Dortronics' Magnetic Lock Brackets

Dortronics Systems is offering the 1198 Series U-Bracket assembly for installing its 1110/1120 Ultra-Lock Series on opening with outswinging all-glass doors.

Consisting of a 14 gauge sturdy satin finished stainless steel angle, attached to a 3/8" thick aluminum mounting block and furnished with an abrasive neoprene gasket, the assembly fits snugly and firmly over the glass door, and is held in place by two socket set screws which become concealed when the armature is attached.

The assembly is available in two sizes: the 1198/50 for 1/2" thick glass, and the 1198/75 for 3/4" thick glass. A complete armature shoulder screw mounting kit is included with each bracket.



Circle 403 on Rapid Reply

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Young Bros. 1991 Catalog

Young Bros. Stamp Works, Inc. announces the availability of its 1991 product catalog.

Young Bros. offers a full line of steel stamp letter, figure and combination identification tool sets, as well as steel type holders and brass stencils. The 1991 catalog provides specification and pricing information on the complete Young Bros. line.

Brigg's & Stratton Offers Key Adaptor

Briggs and Stratton will be marketing the Vats interrogator "Key Adaptor" 595872. This plastic key inserts into the ignition switch and eliminates the need to use expensive adaptors.

Simply cut this plastic key as you would any other and you now have a positive connection for your interrogator. Using the "VATS key

adaptor" 595872 with the Briggs and Stratton Key Probe III (701881), you will have a quick and simple process for interrogating VATS systems.



Circle 405 on Rapid Reply

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D&H Distributing Offers Electronic Bulletin

D&H Distributing Company introduces their electronic bulletin board service for security and alarm dealers. D&H, the first security distributor to offer an electronic bulletin board service will offer catalogs, vendor directories, technical product information, demo software, product application guides and price specials.

Future enhancements will include access to inventory and on-line order entry. All information will be downloadable to the alarm company's PC. The D&H bulletin board service is offered free of charge to security industry professionals. To access this service dial (717) 255-7848.

Circle 406 on Rapid Reply

The InteLock 3000

"All hardware and batteries are included. This unit easily replaces conventional locks and deadbolts in wood or metal doors."



by Dale Libby

Every once in a while something new comes along to tantalize and entice the locksmith. One of these items was the "Key N Keyless" marketed through Schlage. Although the theory was good and the product had immediate appeal to all those who saw a demonstration of the lock, I found several problems with the units that I installed.

To refresh your memory, the lock used a digital readout on the doorknob to enter a three digit code which would unlock the doorknob and the deadbolt above it. Simple in theory but not in application. I ran into all sorts of problems with these units including the following:

The display would disappear and never come back. Only half of a displayed number would appear. The doorknob and/or deadbolt would not operate from the inside or outside. It got to the point that I put away my display so I would not have to show it to potential customers. The manufacturer found that the units were



1. The bolts, user's guide and Schlage keys that come with the InteLock 3000.

put on the market with some bugs in the system, and the customers were disappointed.

However, the actual developer of the technology, InteLock Corp., has now taken over the marketing of this product. They now call the unit the InteLock Key Optional Locking System. The company's first task was to fix all the bugs and problems, which they certainly seem to have done. In fact, the company devoted a full year to upgrade the product to meet all needed

criteria. I was privileged to install one of these new units recently, and was quite favorably impressed with the total package. Photograph one shows the deadbolt and spring bolt on top of the "User's Guide."

I will not go through a complete step-by-step installation, but I will touch on some of the high points of the InteLock, and how it differs from the original unit.

It starts with the User's Guide. This guide is well written and really simple to understand as opposed to the original unit. It is especially easy in the programming part where the user or locksmith programs the access codes. On the old unit, there was a waiting time, and it was aggravating. On the InteLock 3000, the programming is quick and easy, and it worked the first time. (Something of a record, for me.)

For those not familiar with this type of lock, I will list some of the features of the 3000 unit, and then I will make some comments about the actual installation of the doorknob and the deadbolt.

Electronic Deadbolt. The deadbolt is activated by an infrared signal from the lockset. When the correct access code is entered, just turn the outside ring on the deadbolt. Without the correct code, the ring spins freely. To lock the deadbolt when leaving, just



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press the exit button on the inside of the door, close the door, and turn the ring to lock the deadbolt without a key.

Access Code Display. As you turn the knob, digits will appear in the display window allowing you to enter your personal access code. The display is easy to read in daylight and darkness.

Personal Code. By simply turning the knob right and left, you enter your 3 or 4 digit security access code. The door unlocks without a key. If you wish, the door can be opened with a key. Changing your codes is quick and easy, with 10,000 possibilities to choose from.

Alternate Access Code. Easily activated by a switch on the inside of the door, the alternate access code allows you to admit guests and tradespeople without revealing your personal code. This is a temporary access that can be turned off at any time.

Security Alarm. Once someone turns the knob to start entering a code, the correct code must be entered within 30 seconds, or the tamper alarm will sound for 16 seconds.

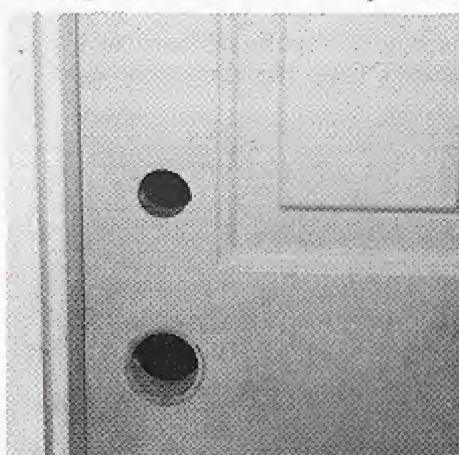
Battery Life and Low Battery Warning. The lock and deadbolt continuously monitor the battery condition and will warn you at least

three months in advance that the batteries need replacement. Both the lock and deadbolt use conventional alkaline batteries. Under normal use, the batteries will last through their shelf life which is three years.

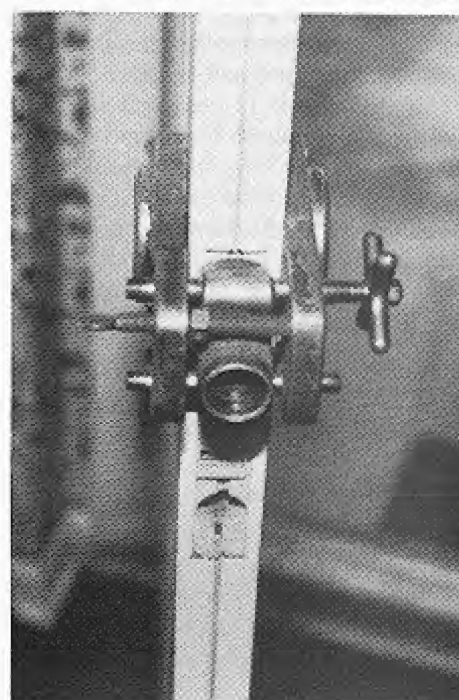
Installation. All hardware and batteries are included. This unit easily replaces conventional locks and deadbolts in wood or metal doors. The distance between the lock and deadbolt should be between 4 to 18 inches, as desired. No wiring is needed, because the lock and deadbolt operate on a wireless infrared signal. Now I will go through the installation briefly with a

few comments.

Photograph two shows the door after I had taken off the existing Schlage doorknob and deadbolt. The lower hole is the standard bore 2-1/8" x 2-3/4" and the upper deadbolt hole is 1-1/2" x 2-3/4" backset. With the IntelLock 3000, both holes must be 2-1/8" in diameter.



2. Standard Schlage set-up with 1-1/2" hole above. Must be drilled to "Standard Bore."



3. Drilling rig on top hole ready to drill it to a 2-1/8" diameter hole for electronic deadbolt.



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with the same backset.

The smaller hole can be correctly drilled and enlarged by the use of a drilling template like the one shown in photograph three. The results are shown in photograph four: Correctly drilled mounting hole above the doorknob hole, both with the same backset. Either backset, 2-3/8" or 2-3/4" will work, as long as both backset measurements are the same for the knob and deadbolt.

The doorknob is rekeyed as a standard Schlage knob is rekeyed (use existing doorknob key, insert, turn 1/4 turn, depress the retainer, etc.). The deadbolt must be disassembled a little differently.

Before the cylinder can be accessed, large phillips head screws must be



4. Door correctly prepped for knob and deadbolt installation.

loosened to expose the back of the deadbolt from the revolving ring.

Photograph five shows the rotating ring with the cylinder separated from the base unit. Do not worry about getting the handing correct, because you will hand it before installing it on the door.



5. The disassembly of the deadbolt for rekeying. The rotating collar must be removed from base before it can be rekeyed.

Photograph six shows the InteLock 3000 installed on the door. The following are my observations on what makes this unit easier to install:



6. The completed installation.

1.) The instructions are user friendly and simple to follow. This is in the area of programming the unit and setting the access codes. There are also several pictures that help with the installation of the electric plug insertion of both the knob and deadbolt.

2.) Some of the optional features of the original lock have been automatically incorporated into the 3000 lock. There is not a switch above the knob battery pack to select function. This is a positive move. The tamper-proof function automatically takes care of this.

3.) This lock forgives a lot of mis-

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alignment. I purposefully mis-aligned the deadbolt sensor from the knob infrared emitter, to see if the unit would work. It did, with no problem. I re-aligned the units before I left.

I was happy with the quick and easy installation of this unit. I liked the user and installation guide. Programming the user codes takes about a minute for both codes to be entered, and once entered, they work. The Intelock 3000 and its instructions have been streamlined, and has a clean feel to it. I will start to recommend it to my customers.

According to Tom Corder, president, "We are very focused and active in our service program with the locksmith. We understand that the locksmith is making an investment in the product when he goes out and installs one of our locks. He needs to know that the lock will function well so that he leaves a happy customer. That's why we not only warranty the lock, but we also warranty any service that might be necessary during the first year."

Intelock will maintain a database of locksmiths who have registered with the company. (Registration will commence at the ALOA show, or contact the company in order to register.) When the locksmith installs

an Intelock, he or the customer must send in the warranty card on the lock. Then, should any problems occur during the warranty period, Intelock will do troubleshooting over their 800 number for the customer. Should a service call be deemed necessary, Intelock will contact the locksmith who originally installed the lock and pay him an agreed upon fee to service the lock on-site.

"We are very confident that our strict quality control measures and re-design work have produced an extremely reliable lock," says Corder. He also mentions that each lock is tested during the assembly process, and production locks now function perfectly.

Recently, a time share company in Florida installed 100 Intelocks on their condominiums. When guests arrive in the middle of the night, they simply enter the code which has been previously mailed to them by management. The program has been so successful at eliminating lockouts that the company recently installed an additional 40 locks on other units.

A marketing program has been launched to help locksmiths sell the Intelock. Signage, working display units, a training video and a trouble shooting guide will all be made

available to locksmiths who register with the manufacturer. Additionally, public relations and marketing is being conducted to spur consumer interest in the lock. Consumers calling into Intelock will be directed to the nearest locksmith who has registered with the company.

Suggested uses for the Intelock include residential applications such as exterior doors for homes to which children need access. A lost key causes a security problem for the homeowner, but a simple to remember combination can easily be changed as desired. Commercial uses for the lock include computer rooms and restricted access areas where keys are not desired. Consumer acceptance testing shows that people are now comfortable entering a simple code or PIN number. Thus the Intelock has received a high degree of consumer interest. The company believes this will allow the locksmith to build profits by selling and installing the Intelock to consumers who might not otherwise be interested in purchasing conventional locksets at this time.

For more information contact: Intelock Corp., 7026 Koll Center Parkway, #225, Pleasanton, CA 94566, (415) 462-2114. §



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Installing Arrow's Sierra

"The new Sierra lock features sturdy construction and independent lever return springs to overcome lever sag. Here's how to install it."

Arrow's new standard duty Sierra lock is designed to meet commercial, industrial and institutional usage where Grade 2 locksets are required. The new Sierra features sturdy construction and independent lever return springs to overcome lever sag. Following are step-by-step installation instructions. (Refer to figure 1.)

1.) Prep the door by using the template provided and mark for holes. Drill the cross-bore hole and then the latch hole. Put in notches on 2-1/8" cross-bore hole. (See figure 2.)

2.) Mortise for latch unit 5/32" into the door edge to dimensions in figure two. Insert latch unit with sleeve if hole is 1" diameter, or without sleeve into 7/8" diameter hole. Make certain that latch bolt bevel faces the direction of closing door. Next, drill two 1/8" diameter holes and secure unit with screws supplied.

3.) To disassemble the lockset unit begin by removing the inside lever. Insert push pin, which is provided, into hole on lever to depress the lever catch. Slide the lever from the tube. Remove rose scalp by slightly twisting counterclockwise and pulling off. Next, unscrew two #8-32 screws and remove inside rose assembly. Unscrew two hollow screws and remove inside support plate. For 1-3/8" thick door refer to figures nine and ten.

4.) To align and center the lock body, engage the latch unit prongs. The lock body retractor must engage the latch unit tail piece. At this point the door must be open when installing a lockset with a guarded latch unit. Note: It is important that the latch unit tail piece is centered about the lock body retractor. Make adjustments if needed by outside support plate as shown in figure ten.

5.) Install the lock unit. Make sure lance in rose scalp is at proper detent position. Push latch unit tailpiece in direction of arrow to its end position.



Arrow's new standard duty Sierra lock.

Next, slide the lock body into the cross-bore from outside position. If necessary move the tail piece slightly to engage retractor as shown in figure four.

6.) To secure the lockset unit to door, place the appropriate inside support plate for 1-3/4" thick door or 1-3/8" door. Proceed to tighten the support plate to the lock body with two hollow screws. Next, drill two 3/32" diameter holes and secure the support plate to the door with two 6 x 3/4 sheet metal screws. This must be done to firmly anchor the lock to the door.

7.) To attach the inside rose assembly begin by positioning the screw holes vertically with wider notch at I.D. in line with the lever catch. Then slide onto the tube and align the rose screw holes with hollow screw. Now secure the inside and outside rose assembly with two 8-32 x 2-1/8 screws.

8.) Install the inside lever by placing the rose scalp onto the inside rose assembly, aligning the two lances with recesses in the rose assembly and turn clockwise to lock as firmly as possible. For doors that are 1-3/4" thick, slide inside lever onto tube. Make certain the lever catch on tube is engaged with the lever. For doors 1-3/8" thick, first slide the bushing onto the lever with the notch in bushing in line with the small

hole in the lever, then slide the inside lever onto the tube.

9.) To remove the outside lever, insert key and turn 45 degrees clockwise. Next, insert push pin into hole on lever to depress the lever catch. Slide the lever from the tube. Remove the outside rose assembly and rose scalp. Note: This step must be done if the door is 1-3/8" thick and if adjustments are needed. (See figure four.)

10.) The lockset is pre-set for 1-3/4" door thickness. For 1-3/8" door thickness follow steps 9 and 10. Unscrew outside support plate and replace with a short neck support plate. Adjust for 1-3/8" thick door. The outside screw post holes in the support plate must be in line with the holes in lock body.

At this point, slide the outside rose assembly with rose scalp onto the tube. The screw posts in the rose assembly slide into two holes in the support plate and lock body. Next, slide the bushing onto the lever with the notch in the bushing in line with the small hole in the lever. Slide the outside lever onto the tube as far as possible. Turn the key 45 degrees clockwise. Push lever further until the lever catch is engaged, securing lever onto tube.

11.) Place the strike box (optional) onto the door frame. Follow with the strike plate and secure with the screws supplied. When the strike box is not used, the recess in the door jamb must be deep enough to allow the latch bolt to extend to its full free length.

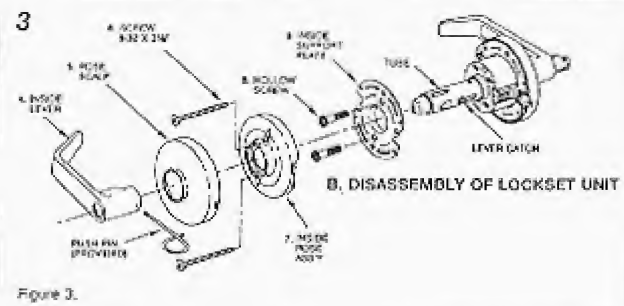
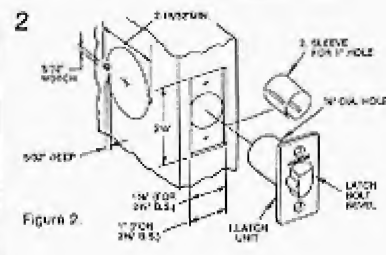
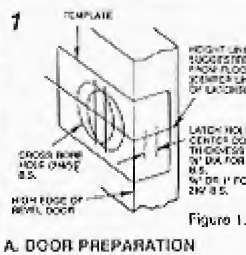
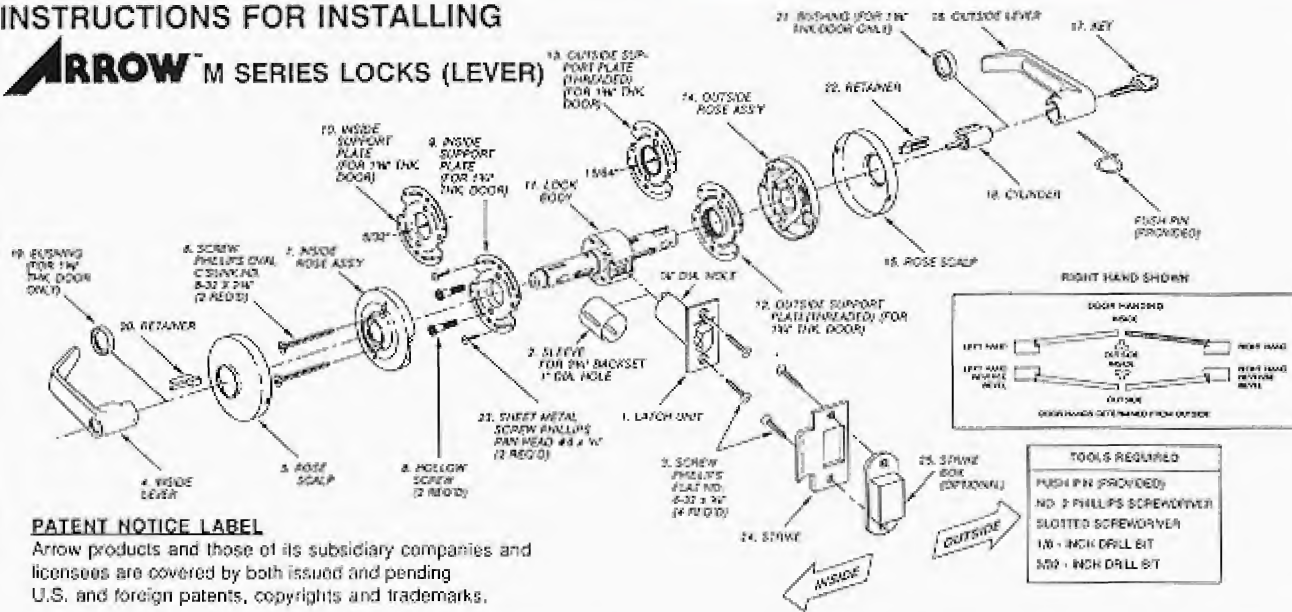
12.) To remove the cylinder, remove the outside lever as described in step four. Using standard pliers, pull out the outside retainer. Remove the key and cylinder from the lever. When replacing the cylinder, secure by pressing the retainer until it's flush with shelf.

Information for this article was supplied by Tom Loughlin, Marketing Manager for Arrow.

(See pages 39 and 40 for illustrations.)

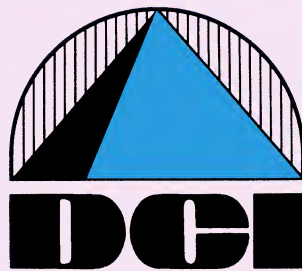
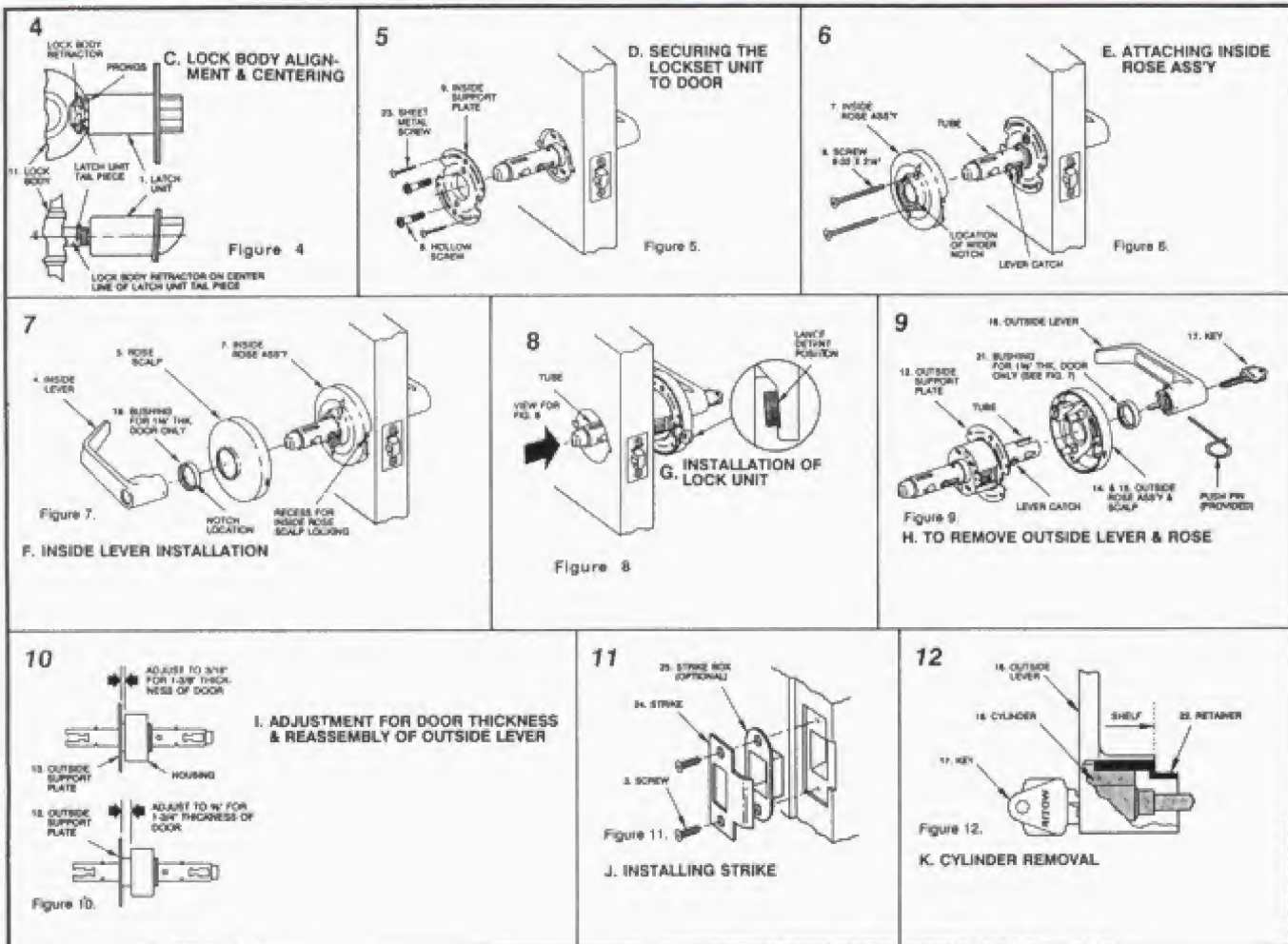
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A New Combination Lock

"Mas-Hamilton's X-07 is a quantum leap in technology using electronics to create a whole new breed of lock. Turning the dial generates the electricity."

by Marc Goldberg

This month once again, I am your traveling Editor bringing you some news of a fascinating innovation in safe lock technology. Recently I voyaged to Lexington, Kentucky home of many famous thoroughbred race horses, as well as a new breed of combination lock. The new lock, called the X-07 by its maker—the Mas-Hamilton Group—is unlike any combination lock you have ever seen before.

Conventional safe locks work by using a wheel pack requiring certain numbers to be dialed before the bolt will retract. The wheel pack technology has been a reliable workhorse since the time of the Civil War. But Mas-Hamilton's X-07 is a quantum leap in



(Left to right) Dan Thompson, Senior Programmer; Harold Brooks, Senior Engineer; J.D. Hamilton, V.P. Marketing; Jerry Dawson, President; Tom Cassida, V.P. Engineering.

technology, using electronics to create a whole new breed of lock. They will be exhibiting their new product at the ALOA show in Anaheim.



The Mas Hamilton X-07 lock.

Before we gallop into the specifics on this lock, let's review an obvious fact. In order to run electronic products, we need electricity. At the risk of

Continued on page 44



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Continued from page 42

sounding dumb, let me mention that this normally requires either a hardwire connection to an electrical source, or at the very least a battery pack. But not with the X-07!

This lock generates its own power as you use it. Let me explain. There are no wheels in the lock. Instead, the lock literally functions as a computer, complete with circuit boards and chips. As you spin the dial, small gears are turned which produce electricity in a tiny generator. The power is stored in a small capacitor about the size of a pea. This electricity is sufficient to power



The back cover is removed showing electronics as well as the change key.



The change key is inserted in order to change the combination.

the electronics and the liquid crystal display which shows the combination numbers.

As you twirl the dial, the numbers appear. Simply stop the dial on the first correct number, reverse directions and stop on the second, reverse again to the last number. You can then use the dial to retract the bolt. I'll go into more detail in a bit on how this all works. However, be aware that the X-07 at first glance looks much like a conventional lock and dial. Of course, on top of the dial is a small screen for the LCD, but all the components are nestled in a lock case with the same specs and dimensions as a 6730. Thus a retrofit application is no more complicated than installing any normal combination lock.

In 1988 Mas-Hamilton was started to fully research and develop this new lock. Chairman of the company is Jimmy Hamilton, President is Jerry Dawson, and VP of Marketing is J.D. Hamilton. Also key to the operation as Director and security consultant is Mas Hironaka, who has spent 40 years in security and intelligence with the US government.

"The X-07 takes the combination lock and the security market from the dark ages well into the twentieth century," says Jerry Dawson. "The old locks are like a single engine propeller driven plane compared to a jet fighter. We consider this lock a revolution. The generator and the electronics in this lock won't wear out in decades."

Let's take a closer look. The manufacturer notes that this computer controlled lock has 27 patented security features. Unlike conventional locks which have a forbidden zone, the lock can use one million different combinations. There is no forbidden zone. In the dual combination mode, there are 500 billion combos. Therefore,

Continued on page 46



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Continued from page 44

it would take 160,000 years to autodial it open in the dual combination mode. Plus the dial is unmarked. The numbers read out on the spy-resistant LCD screen.

Should an unauthorized attempt be made to open the safe, the lock will automatically reset when its microcomputer senses dialing which is too fast or by trying a partial combination. Unauthorized attempts are logged by the system so that the owner can tell it has been tampered with and how many times. Successful openings are also recorded on a non-resettable counter. The combination can be changed with the proper change key and the combination (or serial number may be used).

The X-07 will be shipped in the single combination mode, so that entry by one person of one combination will open the lock. It can, however, be set in the dual mode in which it requires two people with separate combinations to unlock. The lock is truly a computer and it recognizes numbers as being part of the combination only when you stop on that number and then reverse directions. This enters the number into the lock's "memory." (Remember that



This view shows the LCD display on which the combination numbers appear.



The engineering staff has spent countless hours to ensure reliability.

all this is being done with only the electricity being generated by your normal turning of the dial.)

If the correct three number combo has been set to 25 left, 50 right, 75 left, then here is the procedure to open. Simply turn the dial to the left until the lock powers up as evidenced by the LCD. It could take four to six full turns to power the lock. Continue turning counterclockwise until you reach 25. Stop on 25. If you pass it, there is an easy procedure to back up to the number or you can just continue around until you reach it again.

Now turn the dial to the right until you reach 50. Stop on 50 and reverse to 75. Stop on 75. Now reverse the dial to turn to the right until the bolt retracts.

To me, the lock seemed even easier to operate than a standard combination lock. You do not need to dial to a number, reverse course and then pass that number. I sometimes make an error at that point with a regular lock. Because the X-07 has no wheels, you just go from one number to the next. Although it is packed with features, it is exceptionally user friendly.

By the way, as you spin the dial you will notice that when you increase dial speed, instead of passing through the numbers one at a time, the LCD display shows them passing by two or threes. This allows you to rapidly advance the



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numbers till you are close to your needed number. Then slow down until you reach the correct number and stop, thus entering that number.

When I first heard about the lock generating its own power with the spinning of the dial, I made certain assumptions about how it would work. Mostly, I figured that the user would have to work very fast in order to dial the combination while the power was "on." However, like many assumptions, that one was wrong. Once the lock is powered up, you can turn the dial in normal fashion without losing power. In fact, after powering up, the lock will hold power for 40 seconds even if it is not touched. That time was chosen for ease of use, but longer could have represented a security gap.

The X-07 functions in three possible modes: Single combination, dual combination and senior/subordinate mode. In the single combination mode the lock functions much like a standard three wheel combination lock. It will open any time the correct three number combination is dialed.

In the dual combination mode the lock can only be opened by successfully dialing two different three number combinations consecutively. In this mode, either combination may be

dialed first. But both combination holders must be present. After one of the correct combinations is dialed, the display will read "E2." This means that the second combination should now be entered.

In the senior/subordinate mode the lock can be opened only after dialing two combinations. However, both combination holders need not be present at the same time. Once the senior combination has been dialed, the subordinate combination holder may have access to opening the lock as often as he wishes, even if he is dialing his combination after the lock has already powered down. In order to lock out the subordinate combination, the senior one is simply dialed again. The subordinate combo is now locked out until the senior one is re-dialed.

The desired mode, as well as the combination, is set by using the change key. First enter the factory set combination of 25-50-75. Retract the bolt of the lock. Now place the change key into the change key slot located on the back of the X-07. Begin turning the dial to the left. The change key symbol will appear at the top right of the display. Dial in the factory combination again. (Also the serial number of the lock could be dialed instead of the

combination should you ever need to change the combination on a lock when the correct combination is unknown. The serial number appears on the inside back cover of the lock.)

A flashing "SL" will now appear, meaning "select mode." Begin by turning the dial to the left. Enter a number simply by stopping on it the same as you would when dialing the combination. Stop on number 1 for single combination mode, or 2 for dual mode, or 3 for senior/subordinate.

If you enter 1 for single mode, the "EC" symbol will appear asking you to enter the new combination. Dial it in the same manner as described earlier. The lock will now flash the new combination three times and then will display "PO." Pull out the change key now. "CC" will display, meaning "confirm combination." Confirm the numbers by dialing them in and retracting the bolt. The lock has now been set to the new combination.

As I stated before, the lock is simple to operate. In fact it is fun. Mas-Hamilton is taking great care that the electronics operate well and without malfunction. In fact, the lock is being assembled for the manufacturer by Cincinnati Microwave, a well known

Continued on page 168

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Abloy Padlocks

"Abloy padlocks are an excellent starter addition to the products maintained by most shops and offer high security key control."



Send your lock and key questions to Jack Roberts, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107.

by Jack Roberts

Recent changes in the distribution policy of Abloy Security make the product more readily available to the non-dealer locksmith who can purchase all Abloy products and service parts, with the exception of Disklock key blanks, from an authorized dealer or stocking distributor. Although two operating keys are packaged with each Abloy cylinder or lock, Disklock key brands are stocked only by authorized dealers and additional keys or new combinations are available only from those dealers. This enables the locksmith to sell and service Abloy products with only a slight time inconvenience to the customer in acquiring additional keys. This, alone, is an excellent selling point for the

locksmith by emphasizing the strict key control it provides.

While there are several locks and cylinders available from Abloy, the Abloy padlock is an excellent starter addition to the product line maintained in most shops and offers high security key control with only a small investment by the locksmith. Two high security Abloy keyways are available: the standard "A" profile, and the Disklock keyway. (See photograph 1.) The "A" profile key blanks and key machines are available as aftermarket

products from other manufacturers and the locksmith may sell and service this product although the degree of key control is not as high as with the Disklock keyway.

In this article we will review the medium duty Disklock padlock and the outstanding features which make it an easy-to-sell item for those padlockable areas requiring high security key control.

The chrome plated brass body and the case hardened 15/16" steel shackle of the "A" profile and Disklock padlock have the same exterior dimensions and appearances but bear different part numbers. The "A" carries part number

Continued on page 51



1. Abloy high security padlocks: "A" profile (left) and Disklock (right).

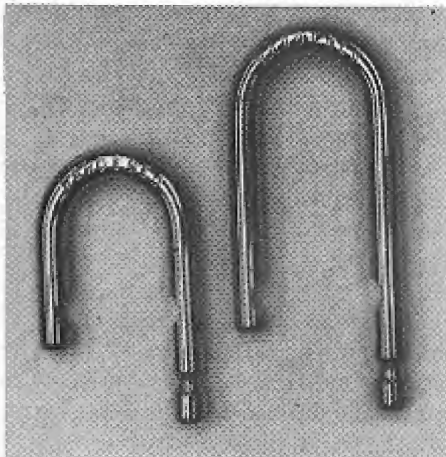
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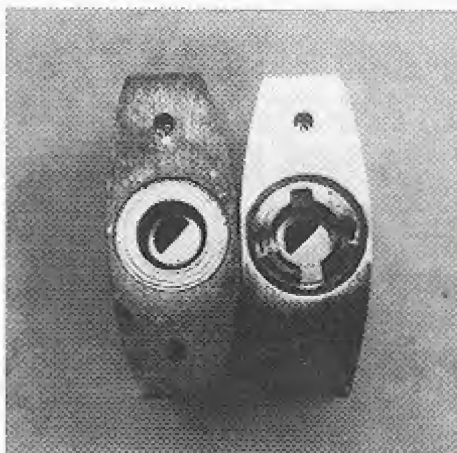
Continued from page 48

3045 and the Disklock part number is 3545. There is a hyphenated number which identifies the length of the shackle. The one inch shackle is 25 and the two inch shackle is 50. (See photograph 2.) Thus, 3545-25 is identified as a medium duty Disklock padlock with a one inch shackle.



2. The one and two inch Abloy shackles.

The ability to rekey the Disklock (and most "A" profiles) is a selling feature since the customer's initial cost can be protected if there is a breach of security for some reason or if additional padlocks are required to add to those already in use. Rekeyable Abloy padlocks are easily identified by a glance at the plug retainer on the bottom of the body. If the retainer is smooth the padlock is not rekeyable, if there are four equally spaced indices on the retainer the padlock is rekeyable. (See photograph 3.)

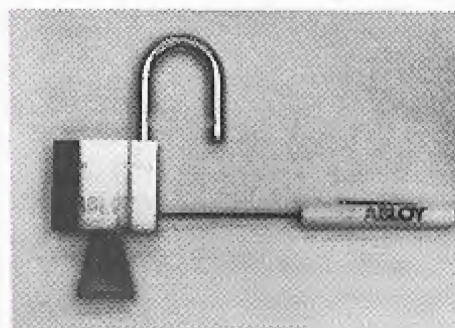


3. Rekeyable (right) versus non-rekeyable (left).

It should be noted that if an operating key is not available for an Abloy padlock any attempt at rekeying is not practical and is not recommended since this is a virtually impossible task due to the design structure of the

assembly.

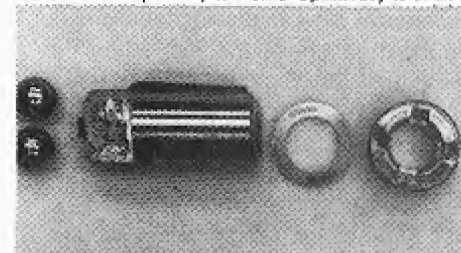
For rekeying, the shackle must be opened to gain access to the plug retainer set screw which is blocked by the shackle when the padlock is closed. With the shackle open an .078 allen wrench is inserted into the set screw access hole and the retainer set screw may be removed. (See photograph 4.)



4. Removing the set screw for rekeying.

The plug retainer may now be unscrewed from the lock body and the Disklock plug removed. The interior mechanism consists of the loaded plug with its side bar and two shackle locking balls. (See photograph 5.) (The apparent rough surface of the plug cam is lubricant which I neglected to remove prior to taking the photograph. The cam is machined to very close tolerances.)

The plug contains eleven rotating disks and spacer, an end spinner, a side



5. Interior mechanism of the plug.

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bar and side bar spring (not shown) and two roller bars. (See photograph 6.) This design makes the Abloy highly pick resistant, and gives the possibility for millions of combinations. This allows for the slogan, "Built Like A Bank Vault Lock," yet there are only seven disks in the Abloy system. (See photograph 7.) From left to right these are numbers 0-6.

Examining the disks we find that one side has a very distinctive dished appearance. This is the top of the disk and must be up, or visible, when the disk is placed in the plug. This could be compared to the bottom pin of a pin tumbler plug, it will only work one way! Also, each disk has very visible side-bar cutouts or notches, (two on disks 0-5, one on disk number 6) which identify the number of the disk. This is similar to the side bar notches found on Briggs and Stratton side bar wafer tumblers; the proper cut on the key lines up with the cutout on the edge of the wafer with the side bar.

In photograph seven the first disk is a "0." Note that there are two side bar notches low on each side. The next disk is a #1; note the location of the notches. The notch locations progress by degrees clockwise to #5. The #6 disk has one notch at the top center. Examination



6. Contents of the plug.



7. The seven disks (numbered 0-6) in the Abloy system.



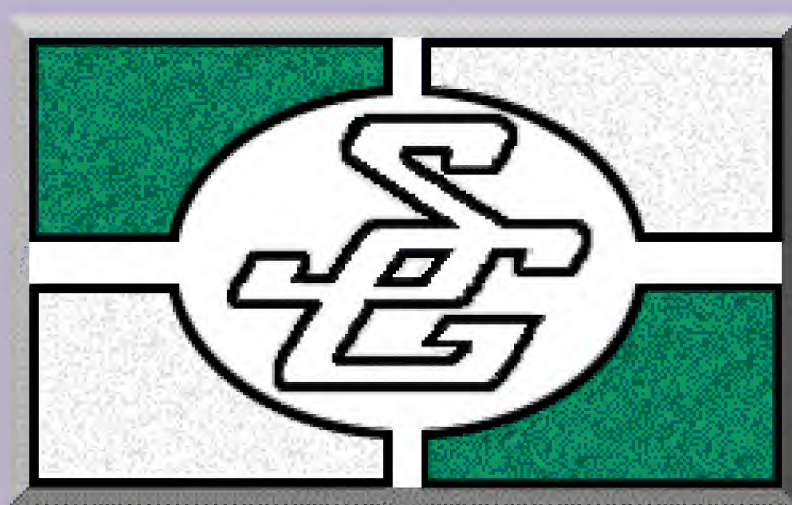
8. Disklock padlock spacer (left) compared to a regular spacer (right).

will show that numbers 1 and 5 and 2 and 4 are opposites while 0, 3, and 6 are very distinctive in appearance. Experience trains the eye to recognize each disk quite easily.

All Abloy products have spacers that are placed between disks, however, the Disklock padlock spacers are slightly different. (See photograph 8.) Note that there is a small notch on one side of the spacer on the left. This is a padlock spacer and the notch is designed to catch the side bar and prevent the key from turning counterclockwise if installed to the left or clockwise if installed to the right. These are the only spacers that can be used in the Disklock padlock and all of them must be installed the same way, either left or right.

Loading the plug is simply a matter of placing the roller bars in their respective grooves, (a tad of lubricant helps to hold them in place, and starting with the first disk always a "0," alternate disk, spacer, disk, spacer, until all are loaded. (Note that the first "0" is not part of the combination but is used to accommodate the tip of the key which is always a "0" cut.) The spinner fits on top of the stack and should be even with the top of the plug.

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doing things, but I prefer to lay out the combination as shown in photograph six and then load the plug. The side bar is placed into position, making sure that the teeny tiny side bar spring is in place. The lock body is prepped for the plug by inserting the shackle to the closed position, applying a small dab of lubricant to each locking ball (to hold them in place), dropping them into the plug cavity and with the tip of a small instrument moving them into the locked position.

The assembled plug can now be inserted into the body cavity, the retainer spacer placed on top of the spinner and the retainer screw into position. Each index on the retainer has a corresponding groove on the bottom for the retainer set screw. When the retainer is flush with the bottom of the lock, the nearest index is lined up laterally with the lock body to accept the set screw.

Insert the key and open the shackle, place the retainer set screw on the end of the .078 allen wrench, insert it into place and tighten securely. Close the shackle; if the index is not correctly aligned the shackle will close completely and the key cannot be removed. Loosen the set screw, adjust the retainer laterally and again tighten

the set screw. When the set screw is correctly seated the shackle will close, the key can be turned and removed and the padlock is ready for service.

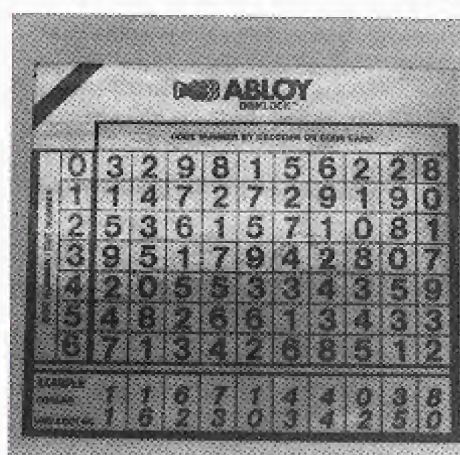
All Abloy Disklock cylinders and locks are rekeyed in essentially the same manner as described in this article with some slight variations depending on the type. None of these variations, however, present insurmountable problems and can be easily addressed.

Packaged with each Abloy Disklock cylinder or lock is a registration card showing the key code for that item. The Abloy Disklock code card (see photograph 9) is used to decode the key

code or registration number to show the cuts of the key and the corresponding disks in the plug. This is simply a matrix grid with each number of the code being located in the body of the grid and aligned with the corresponding cut or disk number on the left of the chart.

The code number 746 737 6831 decodes to key cuts and disk numbers 612 342 0352. This combination can easily be changed by switching two or more disks. An example would be changing the last two disks from 52 to 25. Correspondingly this would change the last two numbers of the code to 83. A non-dealer locksmith can effect a new combination for a customer by sending the registration card with a request for the new combination to an authorized dealer who will cut the new keys as required. There is simply no need for a locksmith to turn away Abloy service business when help is so easily acquired. A good working relationship between the locksmith and the authorized dealer will cut turn around time to a minimum.

All Abloy Disklock products can be master keyed to any level required. While this article cannot give a complete dissertation on the Abloy master keying system, we can explore it



9. Disklock code card.

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in the most simple form as a two level system.

First, each regular disk can be thought of as a bottom pin and each master disk as a bottom pin and a master pin combined. Considering only one chamber of a pin tumbler plug we have a master key cut to a #1 depth and a change key cut to a #5 depth. This is rather easy: drop in a #1 bottom pin for the master key and a #4 top pin for the change key. (1+4=5)

For the Abloy Disklock we will consider only one position (there are no chambers) for master keying and will use the same cuts, 1 and 5. In photograph 10 we see regular disks 1 and 5 at the top and Master disk 1-5 at the bottom. Study this photo and you will understand the relationship of the master disk(s) to the cuts on the keys. We have a master key with a #1 cut in this position and a change key with a #5 cut. Written out, our combinations would look like this.

Master Key Cuts:			
466	540	1	614
Change Key Cuts:			
466	540	5	614
Disks:			
466	540	1-5	614



10. Regular disks 1 and 5 (top) and master 1-5 (bottom). Note the relationship between the master and the cut keys.

The 1-5 master disk placed in the seventh position enables both the master key and the change key but no others, to operate this combination. If we were to add a third level of keying, still using the 7th position as an example, our combinations would look like this written out.

Grand Master Key:			
466	540	1	614
Master Key:			
466	540	2	614

Change Key:			
466	540	5	614
Disks:			
466	540	1-2-5	614

With the disks shown the GMK, MK and CK will all operate. Look at the MK cuts again, with a pin tumbler system we would never use a #2 cut for this key, but, rather, following the rules for pin tumbler master keying, would use a #3.

With the Abloy system we are not concerned with even-odd, thin master pins or adjacent cut differential but can use any number to get the desired result. There are 57 Abloy master disk possibilities. These combined with ten positions and seven regular disks allow even the most complex master key system to be designed.

If you are not into Abloy, try it. Start with a few padlocks and work your way into the rest of the line. Maybe you could even become an authorized dealer.

For information regarding your nearest stocking distributor and/or authorized dealer (now know as a Service Center) contact: Abloy Security Inc., 6200 Denton Dr., Dallas, TX 75235, (214) 358-4762. §



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STOPPERS



The *National Locksmith* magazine would like to welcome you to this year's ALOA show whether or not you are attending in person. In this section of Showstoppers you will find products, many of them brand new to be exhibited this month in Anaheim.

Along with a photograph of each item is a brief description and a Rapid Reply number. If you are with us in Anaheim, please stop by the booths of those manufacturers who interest you. If you

are not making it to the show, circle and appropriate Rapid Reply numbers on the Rapid Reply card in the rear of this magazine. That way you'll still get information about these products.

Of course, not everything to be exhibited at the show would fit here, so be aware there's a lot more to see. To the best of our knowledge, the booth numbers on page 80 are accurate. However, some of them may change after we've gone to press.

**This year, come visit the staff of
The National Locksmith magazine at Booth #812!**

AAA Products' Locksmith Vise

AAA Products International, Jiffy Tool Division, offers a new patented vise for locksmith work, that will hold most lock cylinders for impressioning, picking, shimming, or tough screw removal.

The ML-7 vise comes in a foam lined hard case with three pairs of tough, non-marring jaw inserts. This vise can be hand-held or clamped in a larger vise, and a steel base is available for bolting it to a work table.



Circle 276 on Rapid Reply

Aanon Introduces "Universal Door"

Aanon has introduced "the Universal Door" system which includes all of the Company's high security features. The door system incorporates a revolutionary hinge system with new competitive prices.

The major improvement in this new line, is the hinge system. Besides giving the safes a more modern look, the doors are now interchangeable between hinged floor safes, wall safes and depository safes. More importantly, the change can be accomplished without hand tools.



Circle 277 on Rapid Reply

Abloy 2700 Series Disklock Deadbolt

The Abloy 2700 Series maximum security disklock deadbolt offers some unique features. The lock design utilizes rotating disks rather than pin tumblers which creates virtually pick proof security. The disk tumbler design also affords excellent masterkeying capability.

The bolt itself has two steel balls that lock into the strike to prevent prying or jimmying. A steel guard over the lock mechanism prevents "ice pick" attacks and the deadbolt features a lockable thumbturn which increases the security even further.



Circle 278 on Rapid Reply

Abus' All-Weather Brass Padlocks

Abus Lock Company recently introduced the new 84 Series "Tough Security" Line of "All-Weather" Padlocks. These attractive padlocks are built to withstand the most adverse weather conditions while providing security you can depend on.

The body and double-locking shackle are solid brass, and feature a rugged, protective black vinyl sheath over the entire body. Bronze springs in cylinder assure rust-free operation. All locks carry a lifetime warranty and are ideal for countless outdoor and indoor security applications.



Circle 279 on Rapid Reply

Adams Rite Electric Strike

Adams Rite Manufacturing Co., introduces its 7900 Series of electric strikes for hollow steel frames, the first electric strikes specifically designed to fit the ANSI 3/8" offset preparation.

The basic 7900 strikes come in 6, 12, 16, 24 and 48 volt models, in AC or DC for intermittent or continuous use. They are BHMA Grade 1, all stainless construction and the fail secure versions are 3-hour fire-rated.



Circle 280 on Rapid Reply

Adrian Steel's Versatile Line

Adrian Steel Company, manufacturer of interior service equipment, offers a versatile line of steel bins, shelf racks, drawer units, cabinets, safety security and cab-climatizing partitions, overhead ladder racks and other accessory equipment designed for universal installation in vans.

Their show demonstrator van will be equipped with an Alarm/Locksmith Service interior. It will also feature the new Driver's Data File designed to safely contain work orders, files and manuals, as well as, providing a writing surface.



Circle 281 on Rapid Reply

Amsec's New Depository Safes

American Security Products Co. has introduced a new generation of depository safes with a significantly different formed body design. The safes feature recessed, interchangeable doors with 3-way boltwork.

Top load and front load models are available in 4 sizes, including a wide body model with side-by-side doors for storage of cash trays.



Circle 282 on Rapid Reply

ACSI Offers Hinge Modification

Architectural Control System, Inc., now offers electric hinge modification for virtually any manufacturer's hinge, enabling customers to achieve substantial cost savings and delivery efficiencies.

Customers may deal directly with ACSI, which also designs and engineers a full range of access control and OEM security hardware products for the architectural and security hardware industry.



Circle 283 on Rapid Reply

Arkon Resources Plastic Key Lock

Card Lock™, new from Arkon Resources, is an innovative padlock that utilizes a credit card-size plastic Card Key in place of a traditional metal key.

Anyone who has owned a standard padlock knows that metal keys are easy to lose, and lock combinations are just as easy to forget. Card Lock, however, avoids these pitfalls with its ingenious Card Key which can be conveniently carried in a wallet or pocket. Simply insert the Card Key into the Card Lock, and the lock is opened.



Circle 284 on Rapid Reply

Arrow Introduces Sierra II

The standard duty Sierra II from Arrow is designed for commercial, industrial and institutional usage where Grade 2 locksets are required. Ideal as a replacement lock to update buildings to meet today's code requirements, the standard duty Sierra II is through-bolted for added strength and security without additional mounting holes in the door.

Each lever is supported by independent spring power to eliminate lever sag. The lever is designed to meet handicap requirements and return to within 1/2" of the door (1 3/4" door only). The lock is non-handed.



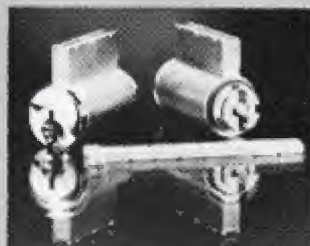
Circle 285 on Rapid Reply

AWI's 8800 Series Cylinders

AWI now has two new key-in-knob lock cylinders.

The AWI 8800 series Convert-A-Lock cylinders are brass featuring precise pin spacing and key-cut dimensions, which match those of original manufacturers, so that they can be used in existing master-key systems.

The Convert-A-Lock 8800 model is adaptable to the Schlage A, D and H series of locksets and the Arrow M, H, K and S series of locksets. The tailpiece is stationary and can be mounted either vertically or horizontally.



Circle 286 on Rapid Reply

Bonafide Factory's In-Wall Safe

Bonafide Factory Products, Inc. introduces an in-wall safe for use in homes, offices, hotels and hospitals.

The Perma-Vault in-wall safe, Model WS-100, provides 710 cubic inches of storage space within its 14-1/4" x 14 1/4" x 3-1/2" interior. The safe is designed to fit between standard wall studs.



Circle 287 on Rapid Reply

Key Probe I From Briggs and Stratton

Briggs and Stratton will be marketing the Key Probe I (701880) and Key Probe III interrogator units with a special addition. The Briggs and Stratton units will have an audible "beep" which will sound at the end of the four minute waiting period. This will allow the locksmith to start re-assembling the steering column while he is interrogating the vehicle. This "beep" will make sure you don't waste any valuable time or move to the next valve too soon.



Circle 288 on Rapid Reply

Buddy's Wall Safe P.O.P. Display

Buddy Security Systems of Chicago has a striking three dimensional point of purchase display for their popular Wallsafes.

Loaded with special attention-getting features, this heavy duty freestanding display showcases the actual Wallsafe so customers can try the combination lock, open the door and look inside the storage compartment.

The top is full color, showing the Wallsafe's important selling points. A "take-one" pad has easy installation instructions.



Circle 289 on Rapid Reply

CCL "Sesamee" Keyless Padlocks

CCL Security Products offers a complete versatile line of keyless security padlocks. The Sesamee series features up to 10,000 possible combinations which can be easily set and reset.

Sesamee padlocks are manufactured with solid brass internal mechanisms and solid brass or durable black epoxy finished pressure cast bodies. The hardened steel or solid brass shackles have clearance of 11/16", 3/4", or 2-1/4".

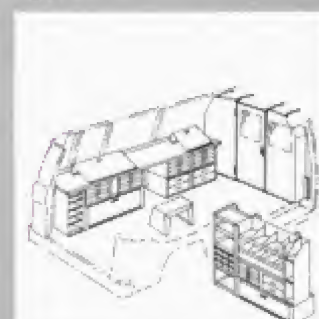


Circle 290 on Rapid Reply

Commercial Van Interiors' Designs

Commercial Van Interior's Inc. introduces several new van interior arrangements specifically designed for the locksmith and alarm industries.

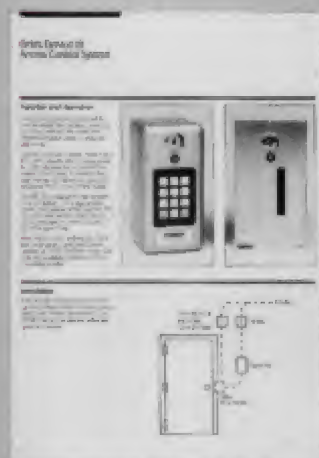
Two sloped key machine mounting bases are developed to tilt the machine forward and provide easier viewing of gauge settings and cutting operations. All equipment is modular, allowing packages to be arranged according to the individual's preferences. The packages are available for all vehicle types and sizes.



Circle 291 on Rapid Reply

Detex's Dentco III Info. Sheet

A new two page product data bulletin describing Detex Corporation's Dentco III access control system is now available. The bulletin describes single door access control which restricts entry to only those with assigned keypad codes or magnetic strip cards.



Circle 292 on Rapid Reply

Rekeying Kits From Dexter by Master

Two new door hardware rekeying kits are available from Dexter by Master Lock for advanced or basic lockset servicing. The kits come in sturdy, molded cases and include colored nickel silver depth pins, a Dexter key gauge, easy-to-read pin identification guide and rekeying instruction booklet.

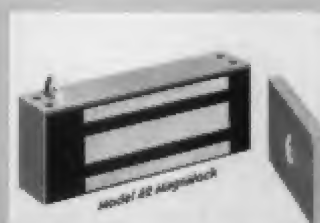
Kit No. 2800 is a full-service rekeying kit to meet almost any rekeying need. No. 2805 is a compact kit, ideal for all basic residential rekeying projects. The "rekeying instruction booklet" includes information on all Dexter products.



Circle 293 on Rapid Reply

D & H Adds To Access Control Line

D & H Distributing Company has added the Securatron Magnalock products to their access control product selection. D&H plans to offer full line stocking and technical support for those locksmiths who would like to expand their sales program to include access control and magnetic locking systems.



Circle 294 on Rapid Reply

Deck Slider's Easy Cargo Access

Deck Slider of Florida announces the introduction of Deck Slider II, a new product that provides quick and easy access to van and pickup truck cargo.

Mounted to the bed of the truck, the welded-steel product slides in and out on stainless-steel ball bearing rollers and is self-locking in three positions. It is completely assembled at the factory and will support 600 pounds of cargo when fully extended.

Designed primarily for servicemen and repairmen, Deck Slider II saves time and effort by simplifying the loading, stowing, and unloading of tools, equipment, and supplies.



Circle 295 on Rapid Reply

Continued from page 58

DiMark Int'l.'s Lord Machine

The heavy-duty accurate Borkey Lord machine can handle cutting Southern Steel and Folger Adams prison keys.

The key machine is supplied with the standard carriage for slotted safe keys and three widths of cutters. The optional double-bit carriage helps to quickly make double-sided safe keys.

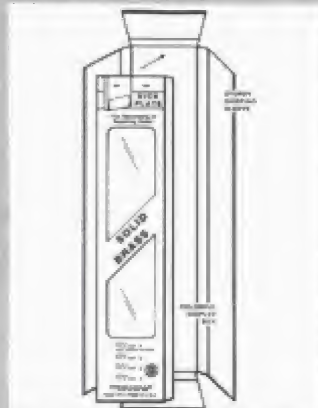


Circle 298 on Rapid Reply

Kick-Plate Series From Don-Jo Mfg.

Don-Jo Mfg., recently introduced a series of kick plates manufactured in either polished brass or stainless steel.

This series features innovative packaging combining the beauty of a colorful display package and the sturdy construction of quality corrugation, resulting in a kick-plate and package suitable for off-the-shelf shipment from warehouse to showroom for immediate display.



Circle 299 on Rapid Reply

Door Systems' Digital Lock

Digital Model 215N is perfect for use with most leading brands of narrow stile door deadlatch devices. A totally mechanical and weather-resistant keyless access control, the Model 215N is installed onto the exterior surface of the door using two machine screws that go through the door for greater installation strength and security.



Circle 271 on Rapid Reply

DynaLock's Electric Deadbolt

DynaLock Corp. has introduced the new 1300 Series line of narrow design electric deadbolt locks.

Ideal for new construction or retrofit the 1300 Series requires a 1-1/2" x 8" cutout and a 15/8" backset.

The 1300 Series is fail safe and is available in 12 or 24 volt AC/DC with optional auto re-lock, door position sensor, bolt position sensor, plus architecturally compatible colors and finishes.



Circle 301 on Rapid Reply



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[Click here for more information](#)

ESP's Model 1000 Manual Machine

ESP's Model 1000 manual duplicator is built for a lifetime of dependable accuracy. Features include 34MC high-speed steel cutter, a bronze gauge fork and, a durable nylon brush.

New features include ESP's wide-carriage design to cut longer, bigger keys, and black-oxide hardened steel jaws for trouble-free vise action. Jaws are reversible, so adaptors aren't needed.

The model 990-12V features a 12-volt motor. Model 990-SLOT includes the SMS-45 side-mill slotter as standard equipment with the 34MC.



Circle 303 on Rapid Reply

H.E.S. 7000 Series Strikes

The 7000 series electric strikes from Hanchett Entry Systems have a modular design that provides a complete functional package. This modular design enables the user to determine the function, either fail secure or fail safe, at the time of installation by the positioning of the solenoid within the unit.

The 7000 series is designed to accommodate latchbolts up to 3/4" throw.



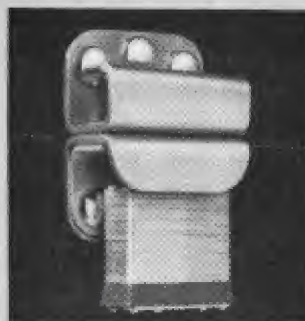
Circle 304 on Rapid Reply

Hartwell Corp.'s Shackle Shield

The Shack'l Shield® from Hartwell Corporation adds the SS250 Series anti-bolt cutter hasp.

Made of hardened plate steel, the SS250 Series hasp is especially designed to accept heavy duty removable core padlocks such as the American 700, Master 29 and Sargent and Greenleaf.

Since padlock shackles vary in length, the hasp comes with an adaptor system that allows the installer to minimize the gap between the frame and the door section.



Circle 305 on Rapid Reply

HPC, Inc.'s Flip-It™

When picking a lock in the wrong direction (intentionally or by error) the all new Flip-It™ from HPC, Inc. (FIT-2) will flip the cylinder plug past the upper pins and save you the job re-picking.

The Flip-It™ comes with two exclusive features. The two pin Quick Lock/Release feature allows for easy release of the rotating action. The sure stop feature prevents over winding in either direction. The Flip-It™ carries HPC's New HQ (High Quality) 5 year warranty.



Circle 306 on Rapid Reply



***We have it all.
Quality, Value,
& Service.***

[Click here for more information](#)

Continued on page 64

Wireless PIR From ITI

A new self-contained wireless PIR (infrared motion detector) has been introduced by Interactive Technologies (ITI).

Little bigger than a deck of cards, this miniature detector contains the PIR sensor, and ITI radio transmitter and a long life lithium battery. Despite its small size, this new detector is sensitive enough to spot an intruder down a 100-foot corridor, and flash the alarm hundreds of feet back to an ITI control panel.



Circle 309 on Rapid Reply

IEI's Door-Gard Keypad Series

Attractively priced, IEI Door-Gard™ access control keypads fit indoor and outdoor applications. Built in features include up to 32 codes, latching, faceplate programming, form c 5 amp relay, timer, & low voltage outputs.

Printer interface option available links up to 8 network IEI Door-Gard™ keypads together, providing printer interface for hard copy activity records.



Circle 310 on Rapid Reply

JS Products' Tool Board

JS Products, Inc. announces its new display merchandiser, Steelman Tool Board. Now auto parts stores can make strong consumer impact by displaying Steelman inspection tools, and the new Steelman Bit Strap.

The tool board is a styrene sheet with color graphics, and comes in a complete kit with the best selling models of Bend-A-Light, Inspector, Brighteyes Pro Headlights, Bit Strap, and replacement lamps.



Circle 311 on Rapid Reply

Jado's Topline Brass Hardware

The Topline 419/446 is Jado's solid brass hardware for the builder.

Topline is known for original designing and quality production. In polished brass, Topline reflects the perfection we have come to expect from a product of the International Jado Group.



Circle 312 on Rapid Reply



**To be a World Leader You Need Quality Products,
Innovative Technology and Strong Partners.**

[Click here for more information](#)

Keri Systems' Proxlock With DPBF

The Proxlock from Keri Systems with "DPBF" is a new idea in access control. It provides the user most of the advantages of a PC based access control system, but it does not require a dedicated computer, nor does it use interconnecting communication cables.

The PXL-45 Proxlock is a single door, proximity access control system designed to work with Indala readers and cards. It is programmed simply by using a hand held, wireless remote programmer.



Circle 313 on Rapid Reply

Knaack Cabinets Offer Security

The Knaack Model 109 Jobmaster™ Cabinet features 47.5 cubic feet of easily accessible storage. Shelves are welded in place and reinforced with welded channels for extra strength and weight capacity. Security is provided by the Watchman® III concealed padlock system and the dual point latching that allows the doors to remain latched, even when the cabinet is unlocked.



Circle 314 on Rapid Reply

The Kryptonite Car Lock

Kryptonite is pleased to announce the introduction of the Kryptonite Car Lock, now available in four colors: black, red, yellow and blue. It extends to approximately 30 inches in length and reduces to approximately 22 inches for easy storage.

Special features of the Kryptonite Car Lock include: an Ace® II tubular keyway also built to stop drills and hole saws; and adjustable hook for easy attachment to the brake or clutch pedal, and a flexible shackle that clamps easily over the steering wheel. It is also a strong, visible deterrent.



Circle 315 on Rapid Reply

LCN's Door Closer Series

LCN Closers introduces the 2210 DPS Series which combines maximum security with concealed overhead mounting.

The 2210 DPS provides secure door control, resists tampering and abuse and interfaces with security monitoring systems. The extra heavy duty steel arm with a low friction roller and the sturdy jam-resistant steel track provide maximum security with safe and easy operation.



Circle 316 on Rapid Reply

Leading Edge's Tool Catalog

Leading Edge Tool Co. announces the introduction of its all new 40 page catalog of "Close Quarters Tools." The development of quality tools for extreme close quarters applications were necessary for aerospace industries to deal with the ever-increasing premium placed upon the maximum utilization of available space.

Leading Edge Tool Co. now brings these tools to industry, tradesmen and handymen.



Circle 317 on Rapid Reply

Leveron Helps Disabled Citizens

Disabled citizens struggling to open doors in public buildings, offices, at schools and work prompted Leveron to convert doorknobs to lever handles with a versatile lever system.

The Americans with Disabilities Act by law mandates access for everyone, which is solved with Leveron's new lever handle knobs.



Circle 318 on Rapid Reply

Liberty Safe's Presidential Series

The Presidential Series is designed for home security, offers many outstanding features. The body is molded from 1/2" thick steel into a strong seamless exterior. All Presidential safes feature double-wall construction, with the inner wall consisting of UL-listed fireboard. The 1" reinforced door is fully recessed to prevent prying. The gear-drive mechanism is guarded by shear-pin protection and extensive hardplate.



Circle 319 on Rapid Reply

Locknetics 340 Series

The new 340 Series Center Pull/Mortise Magnet Lock provides a unique security solution in electromagnetic locking. Its patent pending design conceals the locking mechanism for an aesthetically appealing installation, and it provides a center locking position at the same height as standard door locks.

Features include: mortise mounted magnetic lock in frame with 650 pounds holding force, concealed lock for aesthetic appeal, and an extruded architectural aluminum pull on the door.



Circle 320 on Rapid Reply

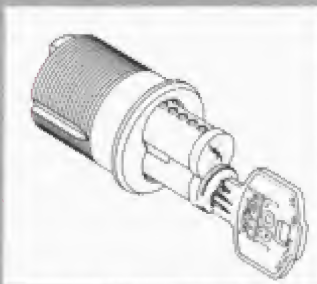
Continued from page 64

Continued on page 68

Lori's Peak® Interchangeable

Lori Corporation is pleased to announce the Lori Peak® figure-8 interchangeable core with patented key control. This core is designed to operate in standard Best, Arrow, Falcon, KSP, etc. style 6 and 7-pin housings and, for the first time, the end user has legally enforceable control over key duplication.

The patented protrusions, or "peaks" used on Lori's Kaba high security keys are added to a brand new group of keyways which provide further protection.

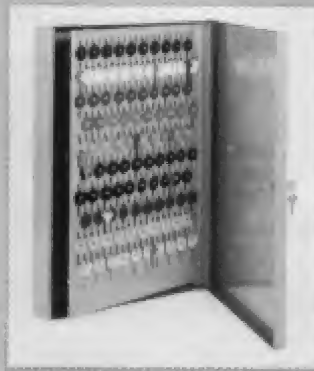


Circle 323 on Rapid Reply

New Lund Key Cabinet

A new Lund Key Cabinet has a locking inner compartment and a locking exterior door as well. Designed to safeguard keys to private records, valuable papers, etc., it leaves the keys in the outer compartment accessible. The locks are keyed differently.

The locking inner compartment has 50 hooks, and the hinged panel has 100 hooks. The cabinet is made of 18-gauge steel, with gray baked-on enamel finish.



Circle 324 on Rapid Reply

Key Bell From Lucky Line

An ideal summer item, the No. 920 Key Bell is easy to find in purses or while at summer activities, and it doubles as a key float for water sports. It will hold one key without sinking.

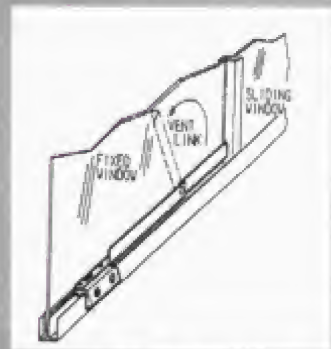
The Key Bell measures 2-1/4" high and 1-3/4" round at the base. Supplied with a 1" solid brass split ring, it is packaged 1/skin card or 12/card in assorted colors: red, blue, yellow, orange, purple, and black.



Circle 325 on Rapid Reply

M.A.G.'s Sliding Window Lock

The new model #8830 Sliding Window Lock from M.A.G. Eng. & Mfg., Inc. features three locking positions: closed, 3" vent, 10" vent. Uni-chrome plated for lasting protection, this product also provides child-proof attachment with security set screws. Installation is easy with no tools required.



Circle 223 on Rapid Reply



HPC, Inc.
Designing Excellence and Manufacturing
Quality since 1956

[Click here for more information](#)

Continued from page 66

Continued on page 70

Markar Products' Hinge Addition

Markar Products, Inc. announces the addition of geared continuous hinges to its continuous hinge line. The geared continuous hinge offers full height door and frame support, as do all of Markar's continuous hinges.

The geared hinge features an attractive design for any application with a clean unbroken line along full door length. No cracks or gaps means maximum energy efficiency.



Circle 327 on Rapid Reply

Marlok Company's Solitaire Plus

Marlok Company has introduced Solitaire Plus, a powerful and flexible addition to its battery powered, stand-alone, Solitaire access control product line. The unit can also be locally powered.

Capable of laptop PC or Portable Programmer based activity maintenance, the PLUS can store up to 3500 users, 15 time zones, each with 4 intervals, 20 holidays and histories of the last 2000 valid key entries and the last 25 illegal entry attempts.

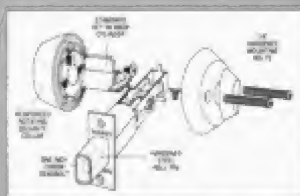


Circle 328 on Rapid Reply

Marks USA's Tubular Deadbolt

Marks, USA, announces its patented 130 Series tubular deadbolt. It features error-proof installation that is quick and easy, regardless of the position of tailpiece, hubs, etc. Both interior and exterior are complete assemblies (no loose parts) and bolt together with massive 1/4" hardened bolts.

The 130 Series uses standard key-in-knob cylinders. Security features such as exterior reinforced, rotating security collar, interior shutters covering mounting bolts on double cylinder models and hardened steel roll pin in the 1" deadbolt are standard.



Circle 329 on Rapid Reply

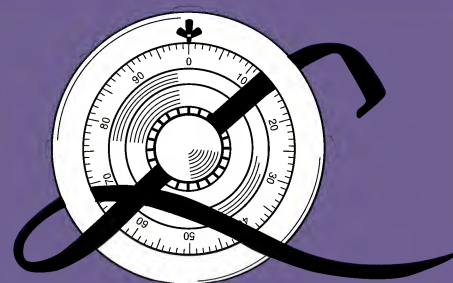
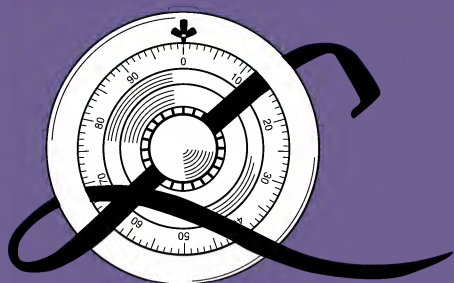
Master Lock Padlock Covers

"Weather Guard" covers from Master Lock help protect padlocks against clogging and jamming due to dirt, dust and road spray. These covers are ideal for shielding padlocks on sheds, gates, boats, trucks, storage areas and other outdoor property.

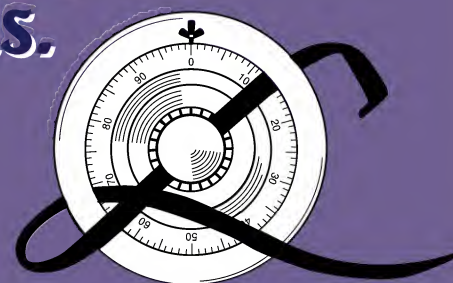
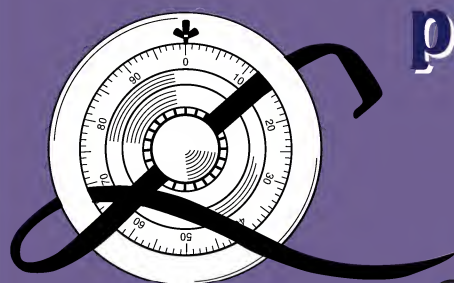
Made of durable ethylene-propylene rubber, Weather Guard covers are available in sizes to fit many Master padlocks. Covers also resist oil, chemicals and temperature extremes.



Circle 330 on Rapid Reply



**Lockmasters has a
44 year history of
training security
professionals.**



[Click here for more information](#)

Continued from page 68

McGunn's CC3224 Cash Controller

A new cash-vending drop safe with large capacity and intelligent, variable time delay cash dispensing is now available from the McGunn Safe Company.

Large capacity provides room for extra cash, rolled coin, and other items. Intelligent variable vending means the safe can be programmed to dispense a roll of nickels instantly, and a tube containing \$200 to cash a check or make a lottery payout only after the expiration of a ten minute time delay.



Circle 331 on Rapid Reply

Meilink Introduces New Line of Safes

Meilink Industries, Inc. has expanded its production capabilities to manufacture and re-introduce its popular line of U.S. made fire resistant record and data safes. Previously these safes were manufactured in Europe.

"By retaining vital manufacturing control, we are better able to meet customer requirements and options or implement product changes when required," said Edward F. Palisin, Meilink's president and CEO.



Circle 332 on Rapid Reply

Metro Safe Seeks Distributors

Metro Safe Company, Inc. is the national distributor of TFL-50 wet and dry lubricants and is looking for a limited number of regional distributors.

TFL-50 wet lubricant is a cleaner and corrosion inhibitor. Spray it on, and accumulated grime, grease and oil virtually melt off. Penetrating action loosens "frozen" bolts, displaces moisture and protects from rust and corrosion.

Non-staining TFL-50 dry lubricant works on clean, dry surfaces to stop squeaking, sticking, and frictional wear. It is completely dry, practically invisible and resists dirt and dust.

Circle 333 on Rapid Reply

New Standard's Convertible Padlock

New Standard Manufacturing Company introduces the Model 2000M Convertible padlock for Medeco interchangeable core cylinders. The Convertible is a dual function padlock which is field selectable to either key retaining (KR) or non-key retaining (NKR) function.

Featuring a solid brass 2" body with all other parts of brass or stainless steel, standard shackles are hardened steel, optional stainless steel shackles are available for extreme conditions.



Circle 334 on Rapid Reply

New Norden Police Lock

Norden Lock Co., Inc. introduces the new Norden Police Lock Interior Cover Kit. The kit mounts over the thumb turn on the well known Norden Police Lock. The cover kit provides additional security by protecting the thumb turn from unauthorized operation.

The kit consists of one center slopped cover; one interior locking cover with keys; eight one-way screws; and easy to follow assembly instructions.



Circle 335 on Rapid Reply

Preso-Matic's 8200 Series Locks

Preso-Matic offers keyless mechanical pushbutton combination door locks with hardened steel deadlatch spring bolt. They lock automatically when a door is closed, and unlock from the exterior only when the correct combination is pressed.

The four number combinations offer 10,000 possible combinations and seven number combination locks offer 10,000,000 combinations.



Circle 336 on Rapid Reply

Prism Presents Hot Lock De-Icer

Prism Technologies, Inc. introduces the Hot Lock De-Icer, the first product designed to unfreeze locks without inserting rods or injecting chemicals that may harm the lock mechanisms.

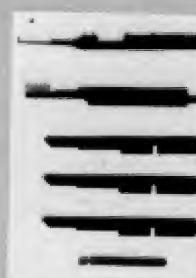
Hot Lock De-Icer is a non-electric, instant hot pack that heats to 130 degrees F. in less than 5 seconds. Pressing the hot pad against a frozen lock melts the ice and unfreezes the lock in about one minute. The pad can also be used to unfreeze doors, windows and windshield washer fluid spouts.

Placing the product in boiling water for six minutes reactivates the pad which can then be used again.

Circle 337 on Rapid Reply

R & D Tool's Side Bar Pick Sets

The GM side-bar lock has always been considered one of the most pick-resistant locks. This is R & D Tool Company's GM and Ford side bar pick sets. They have also developed a series of tools that will pick and decode the Ford side-bar lock, working on the same concept as GM side-bar pick set.



Circle 338 on Rapid Reply

Continued from page 70

Jim Ripley Svc.'s Safe Opening Tool

Jim Ripley's Services, Inc., has announced the completion and successful testing of a new locksmith tool. The tool will be sold under the name of "The Safe Monkey Wrench™".

This has successfully opened TL-15 and TL-30 square door money chests of various manufacturers. Some of these openings have been accomplished in as little as eight minutes without precision drilling or without drilling hard plate.



Circle 341 on Rapid Reply

Rofu Offers Electromagnetics

Rofu International Corporation offers its line of electromagnetic locks and accessories with a number of new products.

The sliding door magnet, series 8000, with a holding force of 700 pounds maximum, can be mortised into a door jamb or can be surface mounted by using the optional rim housing for the magnet and armature plate.

Z-brackets are available in standard and tamperproof models for all series of Rofu magnets.



Circle 342 on Rapid Reply

Schwab Presents Media Safes

Schwab Corp. will present two new small E.D.P. media safes at ALOA '91. The 1820CTS holds up to 1000 3 1/2" diskettes or 12 10 1/2" tapes.

Both models are certified to meet UL's Class 125 - 1 hour rating and are covered under Schwab's exclusive 100,000 covered contents guarantee.



Circle 346 on Rapid Reply

Scotsman's Versatile Machine

The 747X Key Machine from Scotsman Security Products, Inc. is dependable and versatile in duplicating, decoding and cutting-to-code.

Along with the Segal Modification feature, a mechanism to release the machine's inner control to allow keys to be cut in any radial position and depth. Other items included are a solid carbide cutter, heavy duty ball bearing motor, lexan safety shield, and a 3-prong grounded cord. It is available in 100 volt A.C. or 12 volt D.C.



Circle 347 on Rapid Reply

Sandstrom's New Padlock Protection

Poxylube CP-200 dry film lubricant from Sandstrom Products, keeps key-operated padlocks performing trouble-free, while protecting the inner workings for easier key entry and smoother operation with no film or run off.

Poxylube CP-200 stands up to extreme heat and cold, while not evaporating or attracting dust and dirt. It also prevents the build-up of corrosive agents.



Circle 343 on Rapid Reply

Decorative Lever From Schlage

The Mediterranean Collection, consists of groups of products: the Elite and the Designer series, Asti, Avanti, Cara, Merano, Trevi, Fiori, Mia, and Riva, is forged of solid brass and is comprised of six lever and three knob designs. All of the Elite series is available in polished brass and some are also available in polished chrome. The Elite series is unprecedented in its breadth of traditional and contemporary levers in elegant and practical designs.



Circle 344 on Rapid Reply

Secura Key's Entracomp 27SA

The Entracomp 27SA is a self-contained card access control system, featuring the patented slotless Touch card reader. It is protected from vandalism and weather and is suitable for outdoor installations in temperature ranges from -40 degrees to +160 degrees F.

The Entracomp 27SA has non-volatile memory that controls up to 8000 card holders and can store up to 2000 time stamped transactions for later printout.



Circle 348 on Rapid Reply

Securitron's TSB-1 Touch Sense Bar

The Model TSB-1 Touch Sense Bar from Securitron is an architecturally attractive exit bar that releases any electric lock and complies with "no prior knowledge" egress requirement.

The Model TSB-1 currently is part of two UL Listed locking systems involving delayed as well as free and immediate egress for non-fire rated doors, and the full UL Listed status of Securitron's systems allows worry free compliance with building codes and fire department regulations.



Circle 349 on Rapid Reply

Continued from page 70

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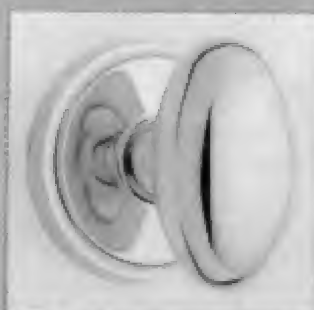
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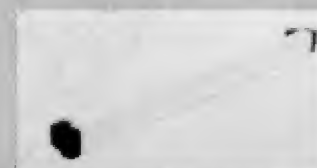


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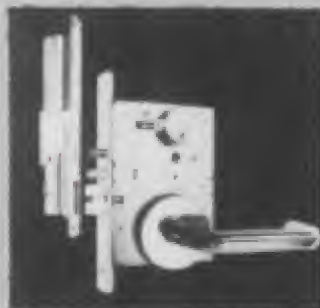
Circle 349 on Rapid Reply

Continued from page 74

Continued on page 78

SDC's HiTower Retrofit

A new HiTower® electro-mechanical lock, specifically designed to retrofit older high-rise buildings required by code to have two-way, safe exit stairtower doors, was introduced by Security Door Controls. Designated the SDC Model R7550, the lock incorporates the same design features of the SDC Model Z7500 Series HiTower lock, including electric remote locking and unlocking or mechanical key control, and mechanical knob or lever operation.



Circle 351 on Rapid Reply

Security Lock Adds Lines

Security Lock Distributors has added two new product lines to its inventory: Von Duprin Electronics and Detex. They will complement Security Lock's six existing lines of electronic locking devices and mechanical hardware.

Von Duprin is a recognized leader in electronic locks and access control systems. Detex manufactures a variety of high-quality security products including exit alarms, exit control locks, access control systems and accessories.

Circle 352 on Rapid Reply

Speedypik Key I.D. System

Introducing Speedypik, the latest in computer technology, devised to pick out keys almost immediately.

It consists of a special patented holder in which the key is inserted and a computer screen used to identify the keys all built into one computer screen used to identify the keys all built into one unit.

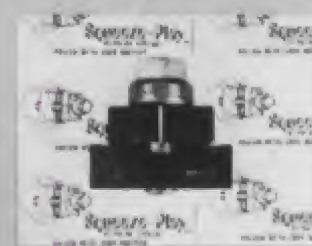
There are currently two models available: the keycutters model which will list the most up-to-date, popular keys usually stocked by all, and the locksmith version which will allow one to program additional keyways and master key sections all in one.

Circle 353 on Rapid Reply

Sieveking Products' Squeeze Play

The Squeeze Play door mortiser from Sieveking Products Co. reduces lock installation time on hollow metal doors by at least 2/3rds, while providing a factory quality mortise. This allows you to use a standard square face bolt and eliminates the need for worrisome drive-in bolts.

Machined from 4140 chrome moly steel the Squeeze Play can mortise commercial hollow steel doors to 12 gauge. There are no extra parts, no cutting and no loss of structural integrity.



Circle 354 on Rapid Reply

Major

MANUFACTURING, INC.

**Every Installation
Is a Self-Portrait
Of the Person Who Did It.
Autograph Your Work with Excellence.**

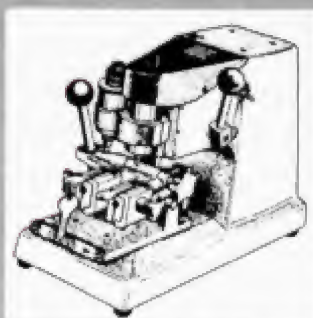
[Click here for more information](#)

Continued from page 76

The Silca Club Jr.

Silca recently introduced the Club Jr. for duplication for Laser/Sidewinder, high security keys like those found on Mercedes and the new Lexus and Infiniti cars.

Adapters are also available as options to duplicate by code the Ford and Jaguar Tibbe high security keys with this highly functional, easy-to-use machine. The Jr. is more economical than the full featured, Silca Club.



Circle 355 on Rapid Reply

Steadfast Offers Tailgate Security

Steadfast Auto Security has introduced Pop & Lock a tailgate anti-theft lock for all 1988 through present GMC full-size pick-ups. This simple-to-install steel product just pops in place over the handle in seconds with no tools.

Easy access to the tailgate handle is ensured and the black finish has a stock look.



Circle 356 on Rapid Reply

Supra Offers Visual Packs

Supra Stor-A-key now is packaged in colorful Visual Packs that are easily displayed, hanging or standing.

Available in two styles, Stor-A-Key is a convenient way to hide spare keys at home, work or storage sites. The versatile padlock mount Stor-A-Key can be mounted on doorknobs, recreational vehicles and fences, and can be moved easily from place to place. It is padded to ensure no surface damage.

Surface-mounted Stor-A-Key is easily mounted with four screws on a variety of surfaces.

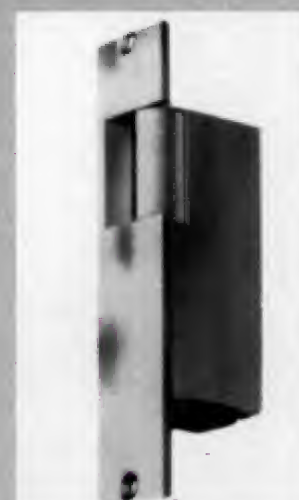


Circle 357 on Rapid Reply

Trine Improves 001 Electric Strike

Trine Products Corporation improves the 001 electric strike, increasing the latch support to make it stronger and more durable.

This movement was achieved by completely redesigning the internal mechanism to contain two moving parts, slider and latch.



Circle 358 on Rapid Reply

Von Duprin's New Alarm Kit

A new alarm kit (ALK) is now available for use with all Von Duprin push pad exit devices, including series 22, 33, 35, 98 and 99. It is designed for use with surface vertical rod devices, as well as with rim, mortise and concealed vertical rod devices.

In addition to the features of the previous design, the new ALK uses a single piezo horn that sounds 103 decibels at 6 feet. Its sounding pattern is designed to extend battery life by sounding an intermittent pattern after a continuous alarm of 6 minutes.



Circle 359 on Rapid Reply

Yale® 2300 Series Door Closer

The Yale® 2300 Series door closer is both durable and economically priced, according to the manufacturer. Intended for use in commercial and industrial applications, the U.S. made closers will control both exterior and interior doors.

They are ideal for use with narrow stile aluminum doors and frames and are often employed as a replacement closer due to their standard screw-hole spacing, which fits most store front closer applications.

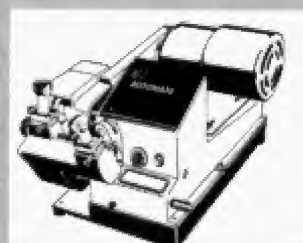


Circle 360 on Rapid Reply

HPC Inc.'s Automate™

HPC re-introduces the Automate™ 6666HQT (high quality tool steel) and Automate™ 6666HQC (high quality carbide) automatic key machines. The new machines are based on the HPC 6666CA, a machine still in use in many lock shops around the country.

Some of the new features include; an instant "on" cutting cycle, a new tracer assembly and a spring loaded carriage for consistent duplication. Both machines are designed to cut accurate keys effortlessly all day long. Engineered to last and back by HPC Services, these machines give years and years of reliable service.



Circle 361 on Rapid Reply

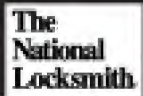
M.A.G.'s 8820 Sliding Door Bar

The new model #8820 sliding door bar is heavy gauge steel that accommodates 28" to 48" sliding patio doors. The unique locking device locks in vented and closed positions. Easy installation eliminates cutting of the bar. The uni-chrome plated finish provides lasting protection.

This product is visually packaged on a 20" card to minimize storage space on the shelf and in mobile units. The bar is universal since it is non-handed and accommodates inside sliders and outside sliding doors.



Circle 223 on Rapid Reply



Opening An ISM TL30

"I grabbed my camera and made some photos of the safe, thinking someday I might need to open a similar safe. Later, I got called to open this same one!"



by Carl Cloud

The safe was laying awkwardly on its side, overflowing the swayback, four wheel dolly on which it rested. The once lustrous paint was now dull, scratched and chipped. The tattered safe drew little attention from the people who were sauntering up and down the aisles of the auction house. I had met this safe for the first time back in 1984, in a much different environment.

The "J. David Company" was only one of many companies owned by Mr. J. "Jerry" David Dominelli. This company, based in La Jolla California, dealt in commodity trading, sales of stock and bonds and interbank currency trading through its numerous offices around the world. The J. David Company had assets of over 125 million dollars.

Complaints from clients caused federal investigators from the F.B.I. and I.R.S. to scrutinize the business dealing of the company. Their finding showed the company at the brink of bankruptcy. More important, millions of dollars were missing or were unaccountable.

When F.B.I. agents and bankruptcy trustees stormed the buildings of the J. David Company, my company was called to open doors and change lock combinations. My partner at that time, Mary McCalester, spent a full day picking open locks on doors, desks, file cabinets, cash and jewelry boxes, padlocks and locks on secret built-in compartments.

I was kept busy opening a small vault and a large nest of safe deposit boxes in Mr. Dominelli's ultra plush private office. Ormate carved teak wood covered the walls. There was a partition constructed of etched and frosted crystal, and a five foot bronze eagle with its wings outstretched, guarded the office door. In the center of the room, all in miniature, were the armies of Napoleon and Wellington at the battle of Waterloo. Thinking back in retrospect, an appropriate depiction of the demise of the Dominelli financial empire.

A second building, next to the company offices, housed the bank. It was here the handling of hard cash took place. It was also here where I first saw the ISM, TL30 rated safe. The door was locked, and the investigators were certain of finding some of the missing money within the safe. I didn't get the opportunity to drill the safe though because a very frightened employee volunteered the numbers and I dialed it open. The safe had been cleaned out; there was nothing of value left inside.

I took advantage of the situation and grabbed my camera

for some photos of the safe. I made notes and took measurements of the various locations of parts, thinking that someday I might need this information to open a similar safe. Little did I know, I would have to open this very safe.

To end the story of David Dominelli, an unknown amount, in the millions of dollars was never found. In 1985, he was convicted of several crimes involving fraud and stealing his clients' money. He is now serving 20 years in the federal prison and was ordered to pay 82 million dollars in restitution to his investors.

Much later, I attended the auction in which his property was sold. The auctioneer cried out, "The next item is number 1282, a Sargent and Greenleaf safe. And folks, let me tell ya, this was the personal safe of David Dominelli. You know, of the J. David company. The safe is locked, we don't know the combination. Lord knows what or how much might be inside. Do I have an opening bid of one thousand dollars?"

There was a murmur of muffled voices and a few forced laughs, but no offers of a bid. I held up my index finger and yelled out, "One hundred dollars." "I have one hundred, do I hear one fifty?" Announced the auctioneer. "I have one fifty, do I hear two hundred?" The auctioneer looked back at me and I nodded my head. No other bids were offered, and I had purchased the safe for a two hundred dollar bid.

I felt as though I had just saved an old friend from the back streets of Skid Row. I had seen this safe while in its pomp and prosperity, and now it lies undignified on a dolly, virtually unwanted, tattered and destitute.

The opportunity to open an imported high security safe doesn't occur too often. To have this opportunity to open the safe in your own shop, at your leisure, is almost unheard of. Since I had this rare occasion, I took the time to photograph my procedures of opening this safe and will share them with you.

Photograph one is a frontal view of the ISM safe. Its dimensions are 32" high, 26" wide, 25-1/2" deep. The U.L. label on the inside of the door rates the safe as a TL-30. The dial ring, Model R132, is a spy proof key locking dial, with an examiner's hasp. Which means, the dial can be locked with a key, and then double locked with a small padlock through the hasp at the bottom of the key lock housing.

The safe lock is a four wheel Sargent & Greenleaf (Model 6731). The entire area of the lock case is protected by a sheet of glass, which eliminates drilling through the front of the door. (If the glass is broken, it releases a relocker within the door.)

Manipulation should be a tool in your safe opening arsenal. A "look" for indications should first be tried on every safe opening. Even if the manipulation is futile in finding any combination numbers, the exercise will confirm the lock is in

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1. Dominelli's ISM TL30 safe.

a working condition. That is, all wheels are being picked up and moved, the lever is free to drop. Plus you'll know the dial indication of the drop area.

I spent about fifteen minutes in manipulation of this four wheel lock. Only one good indication of a combination number showed in my preliminary run of the wheels. It is possible, with time and patience, manipulation may have opened the lock. My desire to dial open this lock was being over-powered by the macho "brawn and brain" syndrome: "plug in the drill motor and let's open this sucker."

Most safe opening procedures follow a basic pattern which is remove or reduce the dial diameter, drill a hole through the door to the locks' fence or drop area, and align or transfer the wheel gates to the drop area and open the lock.

The glass plate in front of this combination lock voids the option of penetrating the safe through the door. The next logical approach to opening the lock is by viewing the change key hole in the back cover of the combination lock. If we can look through the change key hole, the combination can be decoded from the wheels. We must now decide where to drill the safe body, so a viewing scope can be inserted to accomplish this task.

What are the drilling location choices? There are the two side walls, the back wall and the top of the safe.

The left wall, viewed as you are facing the safe, has the least potential. This side of the safe is too cluttered. The locking bolts, the carriage bar, handle cam, all fill this area. These obstructions often block the path to the lock case.

The back wall of the safe is usually not accessible, especially at the customer site. Not that the safe couldn't be pulled out or turned to gain access to the back, but it may be a lot of work with little results. The majority of high security safes, especially the foreign imports, do not have a change key hole through the inside door cover. The cover must be physically removed, or unlocked with a key and swung open

on its own set of hinges.

Even if the change key hole is uncovered, the back wall entry is a low priority method. Too many problems can arise. An interior compartment, a cash box, a shelf, or a large object may be directly in front of the lock case. If the safe is deep, a good quality, long end viewing scope is essential. If the light source of the scope is not adequate, it will be a long frustrating opening for two people; one to turn the dial, and one to view the lock.

The final two options for penetrating the body are the right side wall (the hinge side) or the top of the safe. Either of these can be used successfully. If we look back at photograph one, notice the location of the dial. It is closest to the right side of door. (The center of the dial is just slightly over eight inches from the edge of the right wall.) If you are familiar with this safe, you will know the area from the right wall to the safe lock is clear of obstructions.

Drilling down through the top is a positive approach. Although, you may have the misfortune of hitting a top locking bolt or a carriage bar, moving your hole slightly can usually overcome this obstruction. It will require a long (24") viewing scope.

I opted for the right wall for the drilling location. To determine where to drill the wall, some precise measurements were taken. Photograph two shows the use of a trammel. A trammel is a device that allows you to measure distances over an irregular surface. First, set the trammel at the distance from the center of the dial spindle to a center-line of the change key hole in the lock case cover. An actual safe lock was used to set this distance.



2. A trammel is used to mark the distance over the irregular surface of the dial and ring.

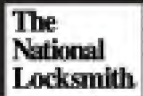
The trammel is placed with one pointer at the center of the dial. By keeping the trammel in both a vertical and horizontal position relative to the safe door, the distance is located by pushing the lower pointer to the face of the dial. Note: the lock is in a vertical up position, therefore, the change key hole location is below the center of the dial.

The transferring of the location of the change key hole is accomplished by using an adjustable square. A line is drawn to the right front edge of the safe body and then transferred to the side wall. (See photographs 3 and 4.)

The distance from the door face to my drill hole in the right wall was 4-1/16". This measurement was from my original notes, which were taken when I first photographed the safe back in 1984.

Determining an unknown distance from the door face to the back of the lock case cover involves taking the known

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3. Transferring change key hole location using a square.



4. Marking the drill location, 4-1/16" from the door face.

factors and adding a few unknowns. Start by finding the thickness of the safe door. Do this by simply sliding a piece of paper (your business card) into the crack between the door and the door frame. The distance the paper slides into the crack, is the thickness of the door.

The thickness of the ISM safe door was 1-5/8". Add the thickness of a lock case, 1-1/16", and the total is now 2-11/16". Adding the thickness of the inner door mounting plate, the sheet of glass, the glass spacers, and the tunnel shaped mounting plate for the combination lock, we will have an additional 1-1/2". Or an approximate total distance from the door frame to the back side of the lock case cover of 4-1/16". This is the measurement that I used in drilling the ISM. I wish I had added an additional 1/2", which will be explained a little later.

Some time ago I read about how to determine the distance to the back of the lock case. The concept began by pulling off the dial. (This is not possible in all situations.) With the dial removed, push the spindle inward until the drive cam is against the back cover of the lock case. Slide a thin wire, a shim, a thin narrow strip of spring steel, or anything that will slip between the spindle and the wall of the spindle hole in the safe door. The inserted probe will be stopped by the post of the drive cam. Measure the distance of the probing and add 3/4". This measurement will give you the distance from the door face to the back side of the lock case cover.

The additional 3/4" will normally be accurate. An additional 1/8" might be considered for extra thick case covers or if the spindle had been cut a couple of threads too long.

If this method is used on a Mosler lock, you must remember that location of the drive cam is on the near side of

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the case. The probe will not enter entirely into the lock case. For Mosler locks add 1-1/4" to the length of the inserted probe.

The marking of the drill location must be performed accurately, then checked and double checked. The time spent drawing lines and re-measuring is the most critical part of a safe opening. A mis-drilled hole can turn a "piece of cake opening" into an Alka-Seltzer lunch.

With the drill point located, it's time to start drilling. Photograph five shows a drill motor hooked up to a magnetic drilling base. This rig is a Magtron Mini-Mag distributed by K-2R Enterprises of Anaheim, CA. A magnetic drilling rig is not required to drill this safe. It does save a lot of gruntin' and groanin', plus you're sure of a straight, perpendicular hole, maintaining a true path to its target.



5. The "Magtron Mini-Mag" drill rig doing its thing.

I used a 3/8" drill bit. (It's just as easy to weld shut a 3/8" hole as it is a 1/4".) You will not pass through any hard plate while drilling the side wall. Therefore, any good quality, high speed drill bit may be used.

The exiting of the inner wall will be noted by the sudden lurch of the drill as it enters an empty air space. But the drilling isn't finished. A hole must now be made through the "wall" of the door. The thickness of the door metal will only be a 1/4" at most. Ease the drill forward and wait for the slight lurch as it passes through the door wall. If you have measured correctly, you can pack up the drill rig, the drilling is over.

And now the moment of truth. If all your calculations were correct, inserting a scope into the hole should locate the change key hole in the lock case cover.

Those of you who use scopes know how critical the movement of the scope can be. Often, it only takes a fraction of an inch to lose or gain the desired view. In the opening of this ISM safe, it requires looking into the scope, then looking to the dial, then back into the scope again. Invariably, the scope will have moved; you must find the view again.

To avoid this frustrating refocusing and adjusting to find the view, a support for the scope is needed. Some technicians use magnets. Two bar magnets forming a "v" to cradle the scope tube works well. A round magnet from a speaker (radio, hi fi) has a hole in its center. This also makes a good support.

Photograph six is a view looking from the top right corner of the safe downward toward the drill location in the side wall. My scope is protruding from the wall of the safe. The



6. The viewing scope supported by modeling clay.

scope appears to enter into a white glob. The "glob" is modeling clay. The clay is a fast air dry composition. I inserted the scope and located it at the view area. The clay was kneaded into the drilled hole, packing it around the scope's tube. A mound built on the safe wall helps to support the head of the scope.

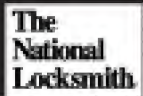
The surface of the clay will begin to stiffen in about five to six minutes. This gives you time to "fine tune" the focusing and viewing positions. A stationary scope will repeatedly show the same view. This makes changes more noticeable as the dial is moving parts past the viewing hole.

I keep mentioning the word "focusing." My favorite scope is Paul Butlers' "Focuscope" from MDS Corporation. As the name implies, the eye piece can be focused. This can be a real benefit over the fixed focus scopes where the depth of view can be limited. The focusing is great for those of us who wear bifocals. I no longer need to crank my head around to see through the lower part of my glasses.

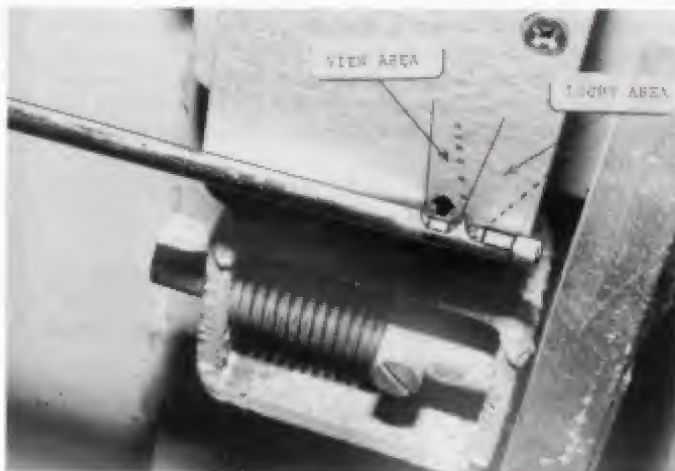
I indicated earlier in this article, I should have added an extra one half inch from the door to my drilled hole. Here is the reason. Photograph seven shows the end of my viewing scope tube laying flat on the cover of the lock case.

This particular scope design has a notch in the tube for the right angle viewing mirror. Immediately ahead of the mirror, toward the tip of the tube, is the light bulb. The distance between these is very short, but with the tube laying flat against the lock case, it gave me a problem. When the mirror was centered at the change key hole, the light source wasn't, and visa versa. I had to slide the mirror to the very left edge of the change key hole to allow light to enter the area. This

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7. When the viewing area of the scope was centered at the change key hole, the light source wasn't.

permitted only a partial view with weak lighting.

This lock had four wheels. Seeing and locating parts of the first and second wheels was fairly easy. The third wheel took a lot of second looks to insure what I was seeing. The fourth wheel was simply out of sight. Had I drilled my hole that extra one half inch farther back, the scope tube could have been moved away from the lock case allowing both a center view and the lighting of the change key hole area.

My original intent was to use the MDS scope tubes and fiber optics for the lighting. The tube shown in photograph eight has the mirror located at the end of the tube. Instead of a light bulb, a fiber optic light source is beamed down the hollow tube and reflects off of the viewing mirror. Therefore, the viewing area is always in the lighted area. This would



8. The viewing and light source end of the MDS mirror tube.

have been the perfect scope for the position of my drilled hole.

This scope by MDS also features the adjustable focusing eye piece. The primary tube is for straight and viewing, a view out the end of the tube. There are three mirror tubes, or sleeves, which slide over the straight view tube. The mirror tubes provide either a right angle 90 degree view, 65 degree view forward or 120 degree retroview or back toward you. The light source is furnished by a Halogen white light illuminator that transmits the light by fiber optics down the viewing tube. This combination creates a versatile scope package for the safe technician.

Why didn't I use the scope? The distance from the safe wall to the center of the change key hole was about a quarter inch farther than my eight inch mirror tube. Guess who will be in the market for 15 inch tubes at the ALOA convention?

Since the lock case was close to the drilled wall, viewing the change key hole and operating the dial was very convenient. (See photograph 9.) This safe opening became a one man job. There will be safe openings where your arms simply aren't long enough to reach the dial and view at the same time. In these cases, one man can still do the job, but

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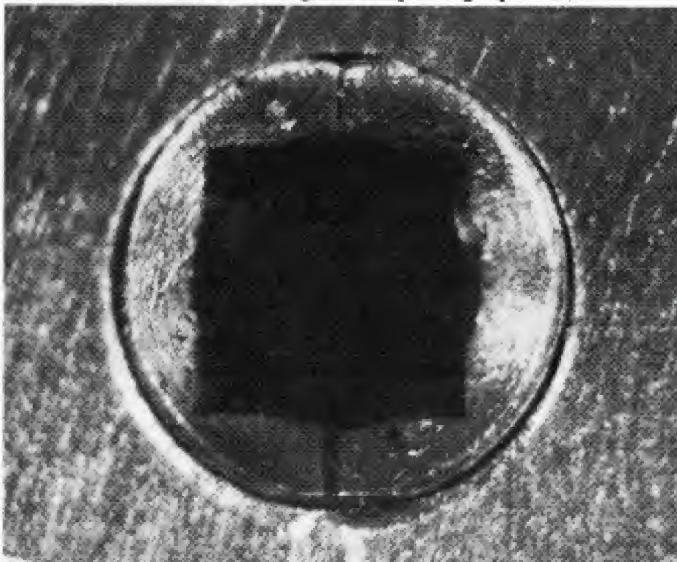
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9. Turning the dial and watching for the change key cams was a one man job in this safe opening.

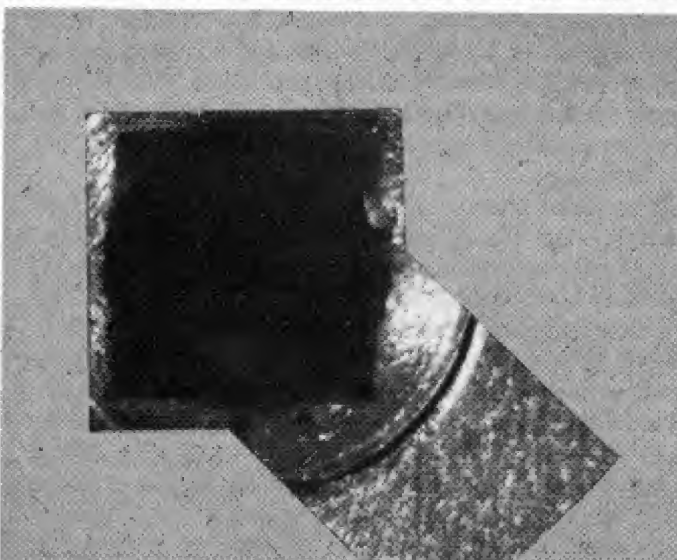
two men will speed up the process considerably.

What are we looking for in the change key hole? Several times will help us along the way, but the change key cam in the wheels are the main target. (See photograph 10.)



10. The change key cam is the target to locate.

To start the procedure, turn the dial in the normal direction for running a combination. For instance, a three wheel S&G lock would start four turns left. The ISM safe had four



11. View of the cam as seen through the change key hole.

wheels; I started by turning the dial five turns to the right. When all the wheels are moving, look into scope. Slowly move the wheels until the change key cam of the first wheel aligns in the center of the change key hole. Photograph 11 is an example of what you can expect to see through a scope.

The first wheel seen through the change key hole is the number four wheel or the wheel that contains the last number of the combination. (All wheel references will now pertain to the four wheel lock of the ISM safe.)

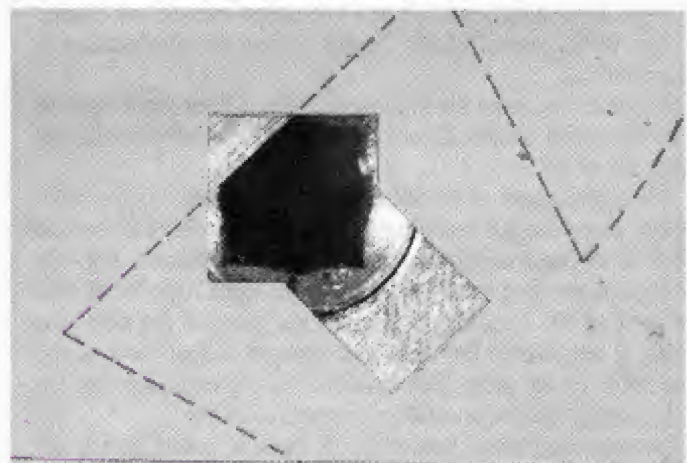
How do we read the combination of this wheel? The dial reading is taken from the *change index line*. In the process of changing a safe lock combination, the existing numbers are run to the change index line. This positions the change key cams of the wheels at the change key hole, and allows a change key. In the need to decode a wheel combination, place the change key cam of the wheel in the window of the change key hole. The combination of the wheel is the number aligned at the change index line. Finding the combination of this first wheel is the easiest part of the job. It gets a little tougher from here.

The combination number found was 48. To confirm the accuracy of the number, I ran the combination turns for the last wheel: two turns left to 48, setting the number to the change index line. The view in the scope showed the change key cam centered in the change key hole, confirming that 48 is the last number of the combination.

In order to create a better view of the next wheel, I added 50 numbers to my found combination; 48 plus 50 equals 98. I ran a combination of two turns left to 98 to the change index line. What will this provide?

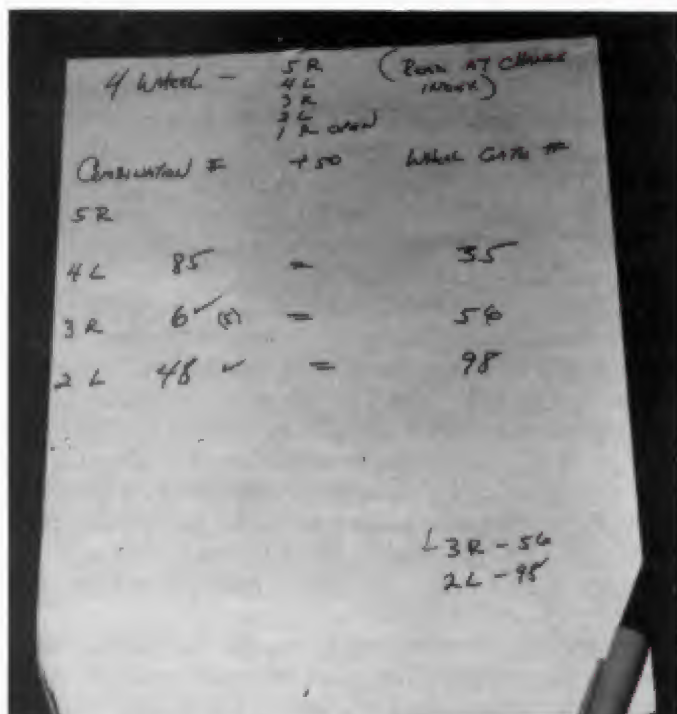
Where is the gate of the wheel in relation to the change key cam? It is directly opposite, 50 numbers away. By adding 50 numbers to the found combination of the wheel, I can move the wheel gate to the change key hole. The wheel gate is wider than the width of the change key hole and will allow, a full width view of the next wheel.

Photograph 12 is a depiction of the view as if you are looking through the wheel gate of the first wheel and seeing the cam of the second wheel. The "root" of the base of the gate will cover a slight portion of the total view.



12. Depiction of viewing the cam of the second wheel through the gate of the first wheel.

After finding the first combination number, it's time to make a record of your findings. Photograph 13 is a copy of my notes. I first reminded myself of the normal turns of the four wheel lock and to read combinations at the *index line*. One column listed the direction, number of turns and the actual combination number found for the wheel. The second column listed the plus 50 combination number to align the



13. Keeping notes of the progress.

wheel gate at the change key hole. My notes indicate the last number of the combination is 48 and wheel gate number (plus 50) is 98.

To start the procedure for locating the combination of the second wheel, I ran the combination of five turns left to 98. This placed the gate of the first wheel at the change key hole. My scope view showed a solid portion of the second wheel. I normally move in increments of five numbers around the dial. I decided to start the second wheel at zero. My dial movements were, five turns right to zero, two turns left to 98.

The scope view showed a half moon opening in the second wheel. This was a portion of a balance hole. (There is a balance hole on either side of the change key cam.) Knowing I had to be very close to the cam, I moved the second wheel five more numbers. The dialing was five turns right to number 5, two turns left to 98. How lucky can you be? The scope showed the change key cam of the second wheel. Testing proved the combination to be number six.

I filled in my notes for the second wheel; three turns right to six for the actual combination number and the wheel gate number of plus 50, or 56.

The combination of the third wheel was found by the same process. Since the last combination number was six, I started the search at 15 (separating the numbers by approximately 10). My dial turns were; five turns left to 15, three turns right to 56, two turns left to 98. This action aligned the gates of the first two wheels at the change key hole and allowed a clear view of the third wheel of the pack. This process was repeated, moving the third wheel in increments of five numbers at a time.

Then the third wheel was set to 35, I saw its wheel gate. If the combination is seen at the change key hole, what would be the combination number of the wheel? Plus 50 or 85.

I now had a combination of 5 turns right to an unknown number, four turns left to 85, three turns right to 6, and two turns left to 48. Only the first number to find!

If you recall, I had problems seeing past the third wheel, I began running the full combination, starting the first number at zero and moving in two step increments. In other words, five turns to zero, four turns to 85, three turns to 6, two turns to 48 and back to opening or drop area (oscillating the dial rapidly in this

area). The first number was increased by two; 2, 4, 6, 8, 10 etc. Somewhere in the mid twenties, the lock opened.

Photograph 14 shows the inner working of the door in the unlocked position. Photograph 15 shows the door with its locking bolts thrown and the combination lock in its locked position. The glass protecting the lock case is mostly hidden from view. A portion can be seen protruding below the spring-loaded relocker, just below the lock case.



14. The locking bolts in the unlocked position.

This procedure for opening a safe with a working combination lock is fine, but what would you do if the lock had a malfunction? Let's say a drive pin had broken off and there was no way to move the wheels. Viewing the change key hole is of no help. Drilling through the door to the lock will set off the relocker. What are the alternatives?

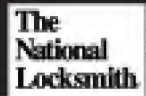
If you had precise measurements for the relocker, I suppose a frontal attack is feasible. It would involve drilling two holes: one to the fence of the lock, a process that will shatter the glass, and a second hole to deactivate the relocker. The sturdiness of the spring might prove to be a serious challenge in probing back the relocker bolt. The other consideration is not only the damage caused, but the repair. Two holes must be plugged, welded and the door painted: the relocker glass and the combination lock must be replaced.

When taking notes on a new safe for your information files, always include a "Plan B" opening technique. My original notes on this ISM safe were primarily directed to the change key hole as my first choice of an opening method. My Plan B included drilling through the right side wall also, but with a different target in mind.

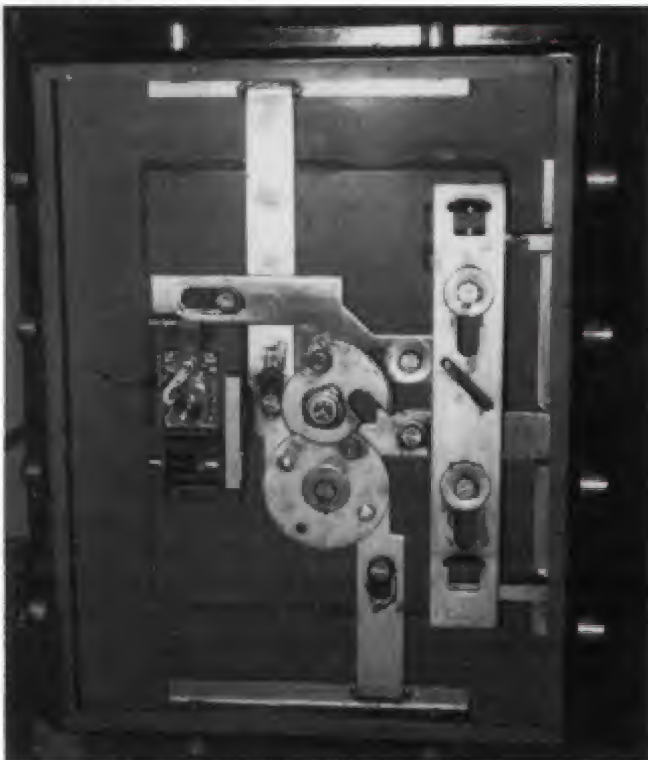
Look back at photographs 14 and 15. Note the horizontal bar above the combination lock. This bar moves to the right as the locking bolts of the door are retracting. The end of the bar has a right angle projection. (See photograph 16.) When the safe is locked, the bar cannot move because the extended bolt of the combination lock blocks the movement of the bar.

My notes included measurements to locate the projection on

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15. The locked positions of the inner door parts.

the bar. If this part could be removed by cutting or drilling it away, the bar could move freely and retract the locking bolts.

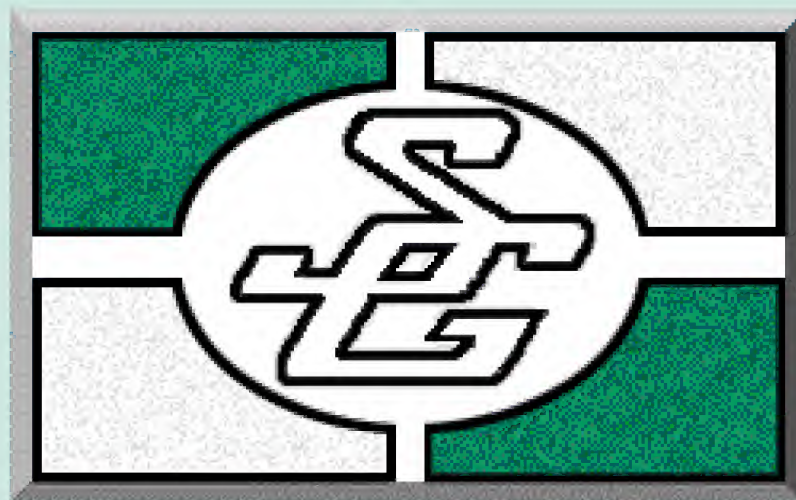
I have not opened a safe using this method, so I can't vouch for the procedure. In theory, it appears to be a pliable approach. If so, it certainly would be more preferable than attacking the door.

The opening of the higher security safes is a new challenge for the technician. Not only do you need a working knowledge of



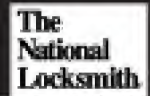
16. Movement of the horizontal bar is blocked by the locking bolt of the safe lock.

the locking mechanism, but also precise measurements to locate these parts. Your tools must include viewing scopes, which can be a sizeable investment. The cost of learning and materials must be weighed when contemplating entering this arena of expertise. Hopefully, your decision is wise and profitable. §



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by Shirl Schamp

You know, I've spent years writing articles on car opening. One or two other people or outfits have also spent that time writing on the same subject. Amazingly enough all these articles, whether they were written by me or by someone else, failed to teach a *system* on how a car should be opened. They simply showed a method on how to open a particular make or model.

What a locksmith really needs is a method or system of looking at a car no matter what the make, model or year is and deciding then and there what will and what won't work on that particular car. You need to compile information from which you can draw. The information can be gathered by pulling door panels in your spare time and making physical and mental notes of how different types of locking mechanisms work. A good suggestion would be to take pictures.

Another thing is to go to every car opening class that's available to you. A different instructor usually teaches a different method. While you're at these classes keep your eyes open for similarities between the various makes and models that are being used as illustrations rather than the specific model or year of that particular car. You've heard the saying: a rose is a rose by any other name. Well more often than not a vertical button is a vertical button by any other name; the make or model is seldom important. That reminds me of when I was really, really young and just getting started in this business. I always had a difficult time trying to remember which one (horizontal or vertical) was up and which one down! So I suggest if you

share this problem, get it straightened out now.

Trade shows, conventions, and seminars are an excellent source of ideas. If you check the car opening tools available and have them explained to you, you then can make an educated decision about these tools. If you know that the tool is not what you need, skip it. If there's any doubt, however, that it just might be better, purchase it even if it ends up in the corner of your shop. The loss will be minimal. More important than the tool itself is what the tool is doing and how. If you absorb 'how' it's entering the car and what it is activating, you will have a better understanding of how the car is defeated.

Nearly all the car opening books available, including mine, repeat a number of car opening procedures. I think it would be reasonable to assume that if you knew ten or fifteen different methods of opening (I doubt if there's many more than that if you totalled them) you could apply one or another of them to any car that's out there and succeed.

Look at that car and instantly evaluate what its possible weak points are, and for any given point know which one of your tools and its application would be best. Of course you'll find that in almost every case you have your choice of multiple points of entry. I usually run through a short list in my head that goes something like this: First I recognize a point that I determine to be the point of least resistance. Now I decide on my tools and method. That would be my first choice. I then select another method in case the first becomes more difficult than I anticipated.

If I were to list a car's points of least resistance, it would go something like this: (Remember that the addition of an auxiliary lock changes the situation.) (1) Wind wings: always a snap. (2) Unlipped windows: a positive entry. (3)

Lipped windows with a vertical button: Depending on pre-80 or post-80, Slim Jim or Super "J", either one is extremely easy. (4) Lift handles. Going underneath them to contact a locking rod. (5) Through the keyhole drain hole: single sided Chrysler products only. (6) Taping. Fantastic method if you use the correct material. (7) Lipped windows with a horizontal locking rod. This requires a higher degree of skill, which accounts for the failure rate of tow truck drivers. (8) Under the glass, then back up and out: Required for the Beretta, but do expand its usage to other cars, especially higher priced General Motor cars. (9) Door Jack: I intend to expand on this a little more as soon as I've covered the points of entry. (10) Hatchbacks: The most overlooked point. (11) Picking or impressioning: Don't lock in (your thinking process) on bypass methods to the point that you exclude basic locksmith skills. (12) The obvious: Example: a side rearview mirror mounting screw in line with the back of an inside locking button. Remove the screw giving yourself an access hole for a rod.

Now let's expand with some light examples of each point. Again I repeat, don't exclude any method of entry. What we want to do is develop concepts that will allow us to face a situation on our own that maybe has never been written yet.

Wind wings: Even though they come in different shapes and adaptations there are basically three methods or types out there. (1) With a deadlocking button that needs to be pushed to release prior to turning the unit. (See illustration 1.) Use "fingers:" I use two tools that were originally designed for VW's, two rods bent with an "L" shape on the end, and pointed on the end a little will do (use spring steel). Go under the window, place the tip of one on the button and the other under the locking arm and then pull the one pulling in the button

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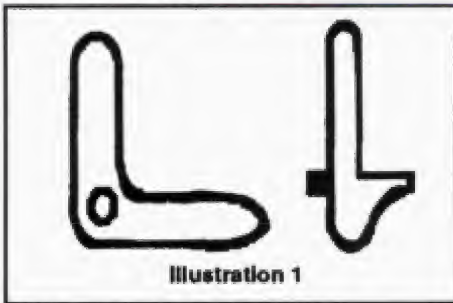


Illustration 1

while rotating the other.

(2) With a deadlocking button that needs to be pulled or released by turning the unit. (See illustration 2.) Do the same thing as you did on illustration one except you must place the tip of the one behind the flanged button and then push in on the tool rather than pulling while rotating the other.

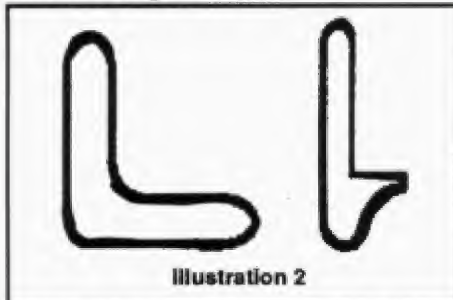


Illustration 2

(3) Without a deadlocking device (see illustration 3) on this one use only one tool under the locking arm. Simply rotate the tool raising the arm. On any of these it can help to place pressure on the edge of the glass nearest the locking device to take the pressure off the arm.

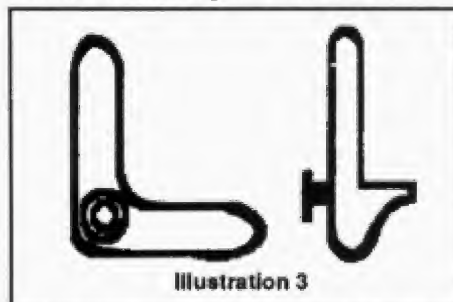


Illustration 3

Un-lipped windows: An un-lipped window can be brought out from the car by inserting a wedge enough to create an opening for tools that will work the lock from the inside. Be careful to only bring it out barely enough for the tools. Don't tempt fate! (See photograph 4.)



4. Using a tool on an un-lipped window.

Lipped windows with a vertical button: I suggest placing a wedge between the glass and the door, spreading it just a little. (See photograph 5.) If the car is pre-1980



5. Working on a lipped window with a vertical button.

Slim Jim for the back of the lock (pawl or cam). If it is post-1980 Super "J" is HPC's name for a Slim Jim with a sharp bend on the end. Newer Toyotas, make a tool to go in under the glass and grab the rod just above the shield about a half inch below the window. (See illustration 6 and 8 and photograph 7.)

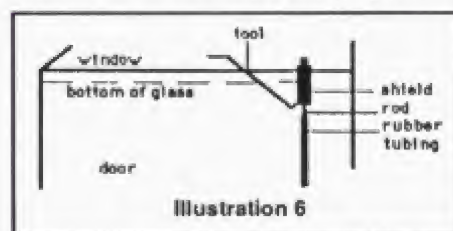


Illustration 6



7. Tool used to contact the linkage.

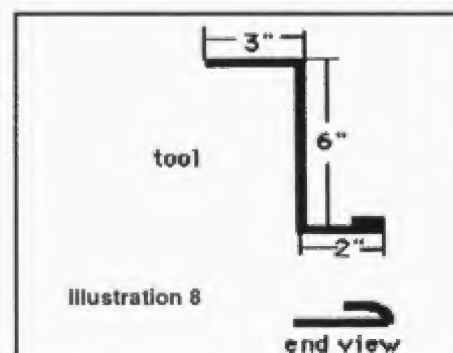


Illustration 8

Lift handles: If you raise the handle you will usually see an opening alongside one of the hinges. Insert a small rod with a bend on the end much the same as the bend on the end of the Toyota tool that was just shown. After entering, grab the rod with the hook, twist a little to apply torque, lower your end of the tool raising the opposite end

and rod with it.

Through the keyhole drain hole: Use on the single Chrysler Products with the exception of a few of the newest models that don't have a drain hole in the bottom of the keyway. Insert into the keyway and down through drain hole located just on the inside of the lock behind the face plate, and then insert farther, just enough that the end of the tool will be positioned at the rear of the lock. The pawl/cam is not rigid and can be moved by lifting or lowering the tools.

Taping: Use the vinyl binding tape they use to bind large boxes for freight and shipping. Sort of roll the tape so that when it's unrolled it still forms somewhat of an arc. Insert the tape (doubled) between the window and the rubber stripping on the edge of the door and let it come around to the button. You'll find if you only move one end or the other it will either move in or out from the button. Shake it into position so you can loop the button and tighten up taking the slack out of the tape and raise the button.

Lipped windows with a horizontal locking rod: (See illustration 9.) These

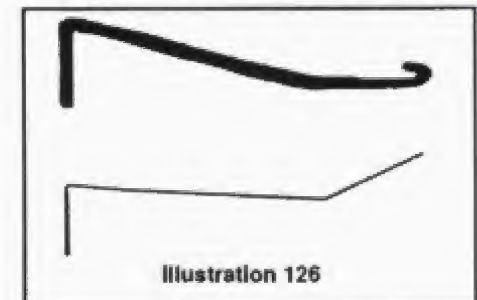


Illustration 126

are two different types of rods that will handle horizontal linkage. One has a single bend that will come up under the rod and catch it. The other has a double bend and will set down on top of the rod and catch it. (See photograph 10.)



10. Opening tool making contact with the rod.

First insert a wedge between the window and the door to provide working room, then insert the tool, catch the rod and twist a little to apply a little torque and then slide the rod. It

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will help to use a flex light to locate the rod while you are still new at this. Generally the locking rod is the top one. If it's not you will see the door handle move inside rather than the locking unit. Should this happen get off the rod and go to the other about two inches away.

Under the glass, then back up and out: The Beretta put the industry in tizzy when it came out. Then HPC came up with a tool that you could insert down one side of the glass, and then come up inside, allowing you to move the inside button. (See photograph 11.)



11. Under-the-glass tool.

Door Jack: This tool when it was introduced by ABC Lock caused you to wonder. It works like a small jack, bringing the upper edge of the door out

from the car, giving you access between the door and the jam. I was concerned and checked with a friend from General Motors. The result was that there shouldn't be a problem, the doors have enough resiliency to cope with it. I do suggest that always spread anything only the distance required to do the job. That doesn't mean reaching your hand in to do the job.

Hatchbacks: I found that in some instances where the back seat is out of the way, and the door locking device is mounted on the rear edge of the door, that it is easy to use an across the car rod from the deck lid. An example would be a 928 Porsche. You'll notice the hatchback is only secured by the locking device mounted in the center. This allows you to raise and wedge a corner with no difficulty. Weld the joints on the across the car tool and carry it as a unit. They are forever breaking and always at the wrong time.

Picking or Impressioning: Quite often we find ourselves very unintentionally becoming so involved with car opening tools and bypass methods that we seem to overlook the very essence of our breed, the ability to pick or impression a lock. There are times that this can be the fastest and most efficient method, especially if the

lock is a single sided wafer type. If you can pick a gas cap you can open these. If they're pin tumblers, even someone who isn't too hot at picking should be able to handle them by impressioning if nothing else. Of course as your skill increases, it will matter less whether they are wafer, single sided or whatever.

The obvious: This could be as little as a window not totally wound up, or as much as a mounting screw positioned where its removal provides access to something. I went on a call once, and on my arrival found the wind wing wide open. I asked the man what he need a locksmith for since the wind wing was open. He responded by saying it took 45 minutes to open that wind wing and then, he found he couldn't reach the button. I asked: why didn't you roll the window down?

Take all these things and work with them, but not to the point of excluding anything else. Expand on them, combine them, or just use part of one combined with something totally unique. There's no such thing as a bad idea. It's just that some are better than others.

I'll leave with this thought: Your prime function is to leave the customer the way you found him except that he'll have his keys in his hand with NO damage done to his vehicle. §

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Locksmiths' Funny Stories

"I didn't know what to think when she asked if I wanted to pet her snake. I just wanted to get out of the sweaty, stinky car of hers."

The following stories were submitted at the request of the Editor by locksmith readers of *The National Locksmith*. Our readers have had many amusing experiences. Why not send us yours for future publication? Send your funny experiences to The Editor, *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107.

This story is about a situation that I had a couple of years ago during a car lockout. I received a phone call on a Friday morning, and it was the owner of a 1987 Chevy Blazer S-10. He asked if I could unlock his vehicle on that day or the next day because he wasn't in any

hurry.

I had decided to do it on the next day because of my schedule. I had gotten all of the information from the owner about the vehicle that I thought I would need. The information was that it was a 1987 black with red stripes S-10 Blazer, parked next to the theater. The owner said that he wasn't sure if he would be there and if he wasn't to go ahead and look for the keys that were thought to be inside somewhere, and he told me to look in the glove box, center console and anywhere else for the keys.

Well the next day came and I was in the van on my way to the vehicle. When I got close to the theater I could see the Blazer, so I parked next to it. I got my

tools out and opened the Blazer with no problems. I got inside to look for the keys. I had already looked in the glove box and I was sitting in the seat taking everything out of the center console and putting it on my lap, when I heard someone ask me what I was doing.

I told the lady who I was and where I was from and that I was looking for the keys to the vehicle. Then she asked me again what I was doing, and I told her again that I was looking for the keys. Then she asked "What are you doing in my vehicle?"

She then told me that the keys to her Blazer were in her pocketbook and that she had not called me. I wasn't sure what to say when a friend of mine named Rick



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walked up and said hello to me. The lady asked Rick if we knew each other and he told her that we did. Then I found out that the lady worked for Rick and the lady told Rick what was going on and he told her that I was ok and not to call the police, which she was threatening to do.

As I was in the van leaving the parking lot I happened to glance behind the theater and there I spotted another Black S-10 Blazer. It was then that I realized what I had done, which was that I had opened the wrong vehicle.

I then did the job on the correct vehicle and made new keys for the vehicle since I didn't find the owner's keys. I wrote the bill out and took it to the owner of the vehicle. The owner asked me if I had any problems. I said no problem, so he paid me and said thank you.

I now get more information which includes the tag number and request that the owner be there if at all possible.

Mike Robitshch
North Carolina

The first year after I opened my shop, word got around that I could open anything: homes, money chests, safes, etc. One morning, a little old lady came into my shop. She carried a shopping bag with her. She asked me if I could open anything, and I told her that I could try. She pulled out a small pressure cooker stuck closed by a rubber gasket. She said, open it. Which I did at no charge!

Frank Zeretski
Pennsylvania

One day a lady came into our store, asking the age old question, "Do you have keys?" Yes, we do! Thinking she wanted a duplicate, I asked her for her key. What?! She wanted a key for her daughter's car which was out in the country. I told her that I would have to have a code or duplicate in order to cut a key. "Oh!" she said. "Don't you have a box of keys so you can pick out a key for my daughter's 1984 Olds." She thought that all it took to get a key was to have this box to get it from.

Marjorie J. Letsinger
Louisiana

Ever since I can remember, I have wanted to be a locksmith. Now, at the age of twenty-nine, I am a locksmith and very proud of it. I never had the money or time to get my business started until the end of last year. I now have a nice

little business out of my vehicle. Imagine my pride when I stopped at the store to get a few groceries only to find that I had locked my keys in the car.

I had no spare keys and I was a half hour from home, so I decided to quickly devise my own car opening tool. I went into the store and asked the girl at the service desk if she had a hanger. So there I am standing at the service desk with my "Certified Locksmith" hat on telling her that yes, I am a locksmith and my keys are locked in my car. She gave me the hanger and I went out to try my luck.

While I was working on it a woman came over who had a car exactly like mine. I told her how embarrassed I was and she asked if I wanted to try her car keys since we had the same car. I knew it wouldn't work but tried it anyway just to get rid of her so I could be embarrassed on my own! She went away and I got the door open with the hanger. And the first thing I did when I got home was make spare keys for my car and for my wife's car. I never want to be in that situation again.

Mark McDermott
Indiana

The following situation happened during the recent security problems faced by one company I deal with. They utilized the button-combination lock on all doors and feared the possibility of entry if the combination remained the same all the time. They changed the combination weekly.

This idea produced a problem to some employees requiring entry at night, as the day time change was not given to them; this prevented their entry. Therefore, an enterprising employee wrote the new number on a piece of paper and scotch-taped it to a window next to an outside door.

The night employee gained access but realized this action compromised security and developed a solution by taping a note below the combination number which read: "Terrorists, thieves, etc. disregard these numbers. Thank you!"

B.A. Blazevicz
Illinois

Just a short but true story of an incident that happen last month at the bowling alley. I bowl quite often on Wednesday, on this particular day I arrived at the bowling alley and a lady spotted my truck and approached me to ask if I was a locksmith I asked her what

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was her problem.

She stated that she could not open her trunk and would I take a look at it. I said sure, so we went to her car and she proceeded to put the key in and try to unlock it, but to no avail. By this time she was frantic as she was supposed to league bowl. She then proceeded to hand me the keys and ask me to try.

I just put my hand on the trunk lid and lifted it up. It had been unlocked all of the time, I believe. The car was a BMW with a spring action trunk. The trunk had been unlocked from the night before and nobody had checked it. Needless to say she was embarrassed and she soon spread the story around the alley about her trunk problem. It was the easiest money I ever lost, but she was a happy woman.

Don Chamberlain
California

The following was sent as an invoice for work on a doctor's house.

After spending over 20 years in a health care setting as a department head, I could not resist the following. Please forgive me!

Patient: Sliding door-Marcel Lake Estates

Preliminary Diagnosis: Door would not open. In order to close door it required slamming & banging.

Initial consultation with Anna of Tashlik Realty, Sunday, Feb. 11, 1990, 9:30 A.M.

Physical Exam: Upon initial exam, realtor exhibited anxiety related to the proposed sale of your house and immediate entry thereof. Physical Findings: Top lock had been installed by a layman and was inappropriate for this door. The bottom lock was inoperable by normal means, i.e. key. The reason for this, in my estimation, was that the slamming of the door disengaged the tail piece from the lock cylinder resulting in this lockout.

Surgical Procedure: We had to do an exploratory exam to determine the extent of internal damage and it was determined, at that time, that extensive surgical correction was necessary. During the procedure a drip of D5%W with .5cc of Scopalomine was administered @ 10 gts/minute to relieve the anxiety of the realtor. A 1/4" drill was inserted into the upper left quadrant of the lower lock cylinder body. Removal of the cancerous material from the lock cylinder was necessary to allow access to the function coordinator, i.e. lock mechanism. A

probe was inserted 5cm into the pawl cavity with a 180 degree counterclockwise revolution. The sticking mechanism was released. At this point we reverted back to the stuck upper lock appendage and with precise manipulation, it was removed from its binding environment.

Final Diagnosis: Top lock is working; bottom lock, which is drilled out, is no longer operable; access and security to the house have been attained.

Discharge Plan: The hole caused by the removal of the lower lock, should be plugged and refinished (by a carpenter) and a new deadbolt should be installed in the lower right quadrant of the sliding door. This proposed new lock is of a unique configuration and unfamiliar to most people. It would require an on-sight consultation before installation, so as to familiarize yourself or the new owner with its operation. The cost of the installation would be \$150.00 complete with 2 keys.

I have attached my bill for services rendered for which I would appreciate a check. Should you feel that you wish to discuss the installation of a new lock further, please contact me at my office.

Larry Kanzer
Pennsylvania

Having a small shop in a small country town, but within 12 miles of a larger city, gives me the opportunity to experience the best of both possible worlds...and unfortunately, sometimes the worst also, as the following story reveals. It was going to be one of those hot, humid, muggy Kentucky summer days as this particular morning unfolded. A short pudgy fellow enters the shop inquiring as to the whereabouts of the car.

After informing me that the car was located about 25 miles away down some obscure country roads, he almost fell off his stool upon hearing the cost. (I provide a counter stool for country customers for occasions such as this.) Upon seeing his reaction, I informed him of the possibility of great financial savings if he could find a key code.

He left the shop with high hopes of locating the code and at the same time mumbling something about his crazy wife losing the keys. (Why is it always the kids or wife who loses the keys??) Having been in business in this small town for 4 years, I felt certain that this would be the last I ever heard from this fellow, or if he did show up again, it would be with ignition assembly in hand

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or the entire car hauled in on the top of a tobacco wagon by an old beat up Farmall tractor. Little did I know at this time that his "crazy" wife was going to create a lasting impression upon me before the day was through.

As high noon approached with the temperature already at 90 degrees, the phone rang (sometimes a big event in a small shop) and you'll never guess who it was. This time, it was my turn to almost fall off my chair when he begged me to come out quickly to make a key for his VW because his "crazy" wife needed the car.

I repeated the charges at least twice so as to get a feel for this man's sincerity, and about an hour later was off to what would become a very unsettling experience. After exiting I75 and driving down a paved road a few miles, my first nagging doubts started creeping in about 3 miles down an obscure gravel road. Had I made a wrong turn? Who could possibly live in this jungle? Had not seen even an old farmhouse for 2 miles!!

Finally, after 5 miles of gravel road through ridges and valleys of non-productive wooded Kentucky hillside, I arrived at a modular home surrounded by brush and weeds with a rutted muddy driveway and a backyard with an old beat up VW bug. My anxiety gradually increases as I was informed that the ignition worked on its own separate key. Was this the beginning stages of one of those 3 day streaks when absolutely everything goes wrong?

If you've ever worked on the ignition of an old VW bug, you know how confining of an environment it can be. Add to this a 98 degree humid, stuffy day, the car sitting in the sun, and a curious customer watching from the passenger seat. With sweat dripping down my arm, wrist, and hand, I could hardly hold the vise grips while trying to impression the ignition. I felt like a sardine, but this was utopia compared to what was to come.

Enter the "crazy" wife by the driver's door, and my tension level quickly surpassed the outside temperature level in terms of discomfort. "What are you doing to my car? Will you hurt it? How long will this take?"...etc. I tried to ignore her until she got real close and the obvious scent of alcohol filled the car. The situation was rapidly deteriorating; the man lit up a cigarette and I hate smoke even in a restaurant not to mention a cracker-jack-box of a car.

The drunk obnoxious lady was

breathing down my neck, and now the key breaks in the ignition. Thoughts of baling out entered my mind; take my losses and get out now and give some excuse that I have no more keyblanks. The man, seeing my discomfort, temporarily defused the situation when he politely asked his nagging wife to go back in the house, but before she did, she had to nag for a few more minutes: "Would you like something to drink? It's a little warm out here! Would like to pet my snake?"

By this time, my senses were overloaded and a fuse was ready to blow when she finally went inside the house. The man quickly apologized for the condition of his obnoxious "crazy" wife. After 10 more minutes of finally removing the broken key and starting a new impression, for some reason a TV commercial came to mind where these guys are relaxing around a campfire frying the fish they caught, drinking a beer, and one of them says "It doesn't get any better than this!" I experienced a slight measure of relief by thinking it doesn't get any worse than this! The next few minutes branded into my brain that "it *can* get worse than this!"

Before I could jump, out from behind my cramped quarters, she was there by the driver's door with her pet snake—a huge slimy, ugly creature wrapped around her neck, shoulders, and arms. It had to be 20 feet long I surmised, and as wide as a telephone pole. This had to be a nightmare. She did say something about a snake, didn't she? But who could believe the rantings of a drunk, "crazy" lady?

Almost leaning into the car, she said "Here's my snake. Would you like to pet him?" Now, normally snakes don't frighten me as long as they're caged up or I have the freedom to get away. Being a born and bred city slicker for 30 years, I even took pride at poking a stick at a black snake and shooting a rattler when I eventually moved to the backwoods of Kentucky. But this situation bordered on the Twilight Zone or Ripley's Believe It or Not!!

A drunk, nagging lady was bad enough. Add to that a large bone chilling, slithering mass of slime only inches from your face, and you have a volatile combination and mind altering experience. It doesn't take long for panic to set in. Within microseconds my already tensed up body began pumping in adrenalin and all those weird chemicals that produce the fight or flight response to intense stress and fear. My mind began racing. Nowhere to flee.



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Can't jump out passenger door with husband sitting there and with the lady and her slithering friend's head about 12 inches from me. I was not about to attempt to bowl her over in a mad dash for my van.

Are snakes as protective of their masters as German Shepards can be?? How could I fight? Could I put this "pet" out of commission by trying to grab his slithering tongue with my vise grips? Or would he then wrap around me and constrict me to a more palatable size like those stories I read about where even a critter the size of a cow could be squashed to one-tenth their size and swallowed by these monsters. Panic stricken thoughts were now flying at warp-10 speed. These were my last minutes of life.

It finally dawned on me that this was one of those bizarre religious cults that you read about that sacrifice their victims, humans or animals, and mutilate their bodies or eat them. They always reside in far out, hard to access places like this one. I was convinced I had been set up and lured to this desolate place to be the object of some satanic ritual. My only question now, was how would they do it. Would the guy now pull out a gun? Would I be tied up? Tortured first? Was the snake then to squash me and my sole purpose to provide him with an appetizer?

I've got to attempt at least a feeble effort of defense by bowling her over. Then I visualized myself being bitten and of all things, scenes of my childhood hero in his pilot episode that I looked forward to watching on TV every year; the Lone Ranger when he was the sole surviving Texas Ranger at an ambush massacre. All the shooting was over, and barely alive, he crawled to a nearby water hole where his future companion, Tonto found him.

I'll never forget the way he crawled. So gracefully. It sent chills up my spine. When I played cowboys and Indians, I was a great "crawler" when wounded and even became angry with my playmates for not crawling properly. But now I visualized myself, after being bitten, trying to crawl the 100 feet to my van. Surely, after all these years, I fantasized, I could finally get an academy award for this great crawl.

But then reality set in as I reached my van, dialed 911 on the cellular phone, and that all too familiar beeping out of range signal is heard. My abductors must have known that. Why else would they allow me to crawl so far, as I turned around losing consciousness, and saw their

smiling faces under the covered porch, sitting, and sipping ice tea.

Then, for what seemed like hours in this nightmare world but was actually seconds, I was snapped back to reality. Just as I was poised to bowl her over, I heard some guy saying, "He doesn't wasn't to pet your snake, Martha. Now quit bothering him and take Slinky back inside." Off she (they) went.

Never have I ever finished impressing a key so quickly, collected my money, and run for my life. Even got to use the excuse no more keyblanks when asked to make a duplicate, and I swear my little Astro van made that 5 mile gravel road trip in about 60 seconds.

Why are things like this funny when looking back on them? Should I have bailed out when the key broke? Was that snake really 20 feet long and 12 inches wide? And he was poisonous or able to squash me? Maybe these are the things that make life worth living. They can be reflected upon.

We can wonder about our perceptions or about what might have happened had we made a different decision or we can even learn and grow from these types of experiences. And whenever I hear that expression "It doesn't get any better than this," I am reminded of the opposite expression along with a "Slinky" memory!!!

Jim Muszynski
Kentucky

Working the local county fair one time, I was called upon by the fire department to unlock this late model Chevrolet El Camino. The truck had a fire inside the cab. After I unlocked it, the fire dept. opened the door, turned their hoses inside putting out the fire, locked the door and closed it.

When I asked if they were going to contact the owner or at least put a note on the El Camino advising what happened, I was informed by the fire dept. "No."

I often wondered what the owner thought when he/she came out of the fair and found the late model El Camino full of smoke and water when opening the door.

Jack Lindstrom
California

It was mid afternoon when I received a call from a furious mom. She and her 5 year old son had just finished grocery shopping, and like all of us seem to with \$300.00 worth of groceries, they went out to eat.

They went for a burger. The drive up line was so long, the mom decided she would run inside leaving her son in the car. Forgetting the keys she locked him safely in. When she returned she found the doors locked, her son stuffing his face with chocolate bars, one in each hand and mouth stuffed full. He refused to open the car.

That's when she called me in. After quickly opening the car I had to wait while she beat the snickers out of him. Then turning to me she smiles, says thank you and what do I owe you? Then the reply we all live for: "It's well worth it!"

My strangest call to date began with a phone call. The man said I'm embarrassed to ask this but can you open padlocks? You bet I replied, don't be embarrassed we do this all the time.

Well could you come to my house? Sure, I said. Well can you unlock my front door to get in? Sure, I replied but you'll have to meet me there. Oh I'm home he said, but, well, this is the embarrassing part. My girlfriend thought it would be fun to chain me to the bed.

But then she left four hours ago and hasn't come back yet. Oh I said, Well, yes-ah-ah-ah I can come help you out. How much will it cost he asked? I told him, and he said "Well that's too much. Forget it. I know she has to come back. I'm wearing her pantyhose," click!!! He hung up. Honest Injun.

Mark Matherly
New Mexico

This story is true!! It happened on a Friday afternoon about four o'clock. No names have been changed because no names are revealed. The attractive middle aged lady came into the shop and laid a "baggie" type sandwich bag, containing two keys, on the counter and said, "I would like a copy of each of those keys, please." I could see that one of the keys was a Best sectional and the other a 4R Corbin.

Dumping them out of the bag into my hands I examined the keys and recognized the Best as being from the local university. Our procedure is to always ask what a restricted key such as this is for or what company owns the key. Any type of convoluted question to test the person who has brought the key to us. The lady answered, "They are my keys."

"Yes," I said, "I'm sure they are, but this one is a restricted key, possibly from the university," holding up the Best key. "Yes," she answered, "That one is for my

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classroom and the other is for my desk." "Well, M'am," I replied, "I'll make the desk key for you, but you will have to go to the security department for another door key." I immediately duplicated the 4R and told her the price as I laid the original and the duplicate on the counter.

Adamant, she asked "Why won't you make the big one?" I then explained briefly about security systems and how key control is maintained in an institution such as the university and that if they

wanted her to have two keys they would have issued them to her. And, further, that I was not going to breach the security of the system by making her another key. "Oh," she said, "I don't want an extra key, I want a different one. You can destroy the old key when I get a new one." "And," pointing to the original 4R, "You can destroy that one also."

Now, I have been cutting keys for a long time and I think that I have heard just about every excuse in the book for getting an extra key for a restricted or controlled system, but this lady doesn't

want an extra key, she wants a *different* one. I toss this around in the old brain for a couple of seconds trying to figure out just what this gal has in mind, but nothing seems to jell. So I says, "Mam, this just doesn't make sense to me. Why do you want me to make duplicate keys and then destroy the originals?"

Sheepishly, she looked at me in the eye and said, "They fell in the toilet." My mouth fell open so wide that I almost bruised my chin when it hit the counter. I couldn't believe I was hearing this, but after a moment I regained my composure and said, "Why don't you just put them in boiling water for a few minutes?" Her reply?? "I did that, but I would still feel yukky if I touched them."

I just about flipped out right there on the spot. It's ok for me to handle her keys that have had a bath in the commode but she feels yukky about touching them. Normally I try to handle all strange requests and difficult situations with some degree of finesse, but this one blew me away.

I put the original keys back into the baggie, tossed the duplicate 4R in the brass box, handed her the baggie and told her, "Take these to the university security department and have them make you new keys. Maybe they won't feel as yukky about it as I do."

Monday I guess I will order a box of medical examination gloves, you just never know what you might be handling when you duplicate a key.

Jack Roberts
Ohio

I would like to begin by mentioning that I was forced into the locksmith business by my father approximately 18 years ago. I developed a resentment towards the business. Now 18 years later my father has retired and I have taken over the business. And, I must admit that as reluctant as I was to get involved to this extent, the trade has provided my family and me a comfortable standard of living. This preface will help you to understand how obnoxious and funny my story is.

If there is one thing I really abhor it is having my beauty sleep interrupted. Anyway, it was one of those rare cold Miami nights, temperature was in the 40's. It was great to stay in bed all night. The weather in Miami is in the 80s approximately 360 days a year. The other five days it tips to a very cold 60 degrees.

At the time, I was going to the University of Miami and to make extra

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income I would run night calls. It normally was not a problem since I was usually up studying. However, on this cold December night, I decided to close the books early and enjoy a great night to sleep. About 2 a.m., the phone rang. I thought I was having a nightmare. I could not understand what anyone would be doing up at that time on a morning like this. While the phone was ringing I was trying to regain consciousness. I heard a little voice saying "disconnect the phone" and another one saying "don't listen to him, answer the phone." This went on in my head a few times until I finally picked up the darn phone. And this was the strangest call I had ever gotten in all my 18 years in the business.

Customer: Is this the locksmith?

Me: Yeah.

Customer: Ah...Jorge your friend told me to call you and said that he needs you to open a locked Rolls Royce.

Me: Well, can't he wait till the morning?

Customer: Wait a minute....(background) Can you wait till the morning, he said...(pause). No, he can't, he needs it now, cause, ah, he will freeze inside the car.

I am still struggling trying to stay awake. I heard him say "inside the car" but I really did not listen. Jorge was a friend and a very good customer and I knew that he would not play this kind of prank on me. So, I asked the customer to put Jorge on the phone.

Me: Let me speak with Jorge.

Customer: Ah...Well he can't come to the phone...

Me: Hey listen...either I speak to Jorge or...

Customer: He can't come to the phone...He is ..Ah...inside the car.

Now I am really losing my cool, but this time I heard him say "inside the car".

Me: Did you say he is inside the car?

Customer: Yeah...

Now I am really steaming. This guy is crank-calling me, so I think.

Me: So, he lost his keys, then...

Customer: No, the keys are inside the car...

Me: You mean inside the trunk.

Customer: No, inside in the ignition.

Me: But you just told me Jorge is inside the car.

Customer: Yeah...

Well, I didn't know what to say to this guy. But, I had lost my patience. I thought for sure this was a crank-call.

Me: Look buddy, funny joke... Don't

you have anything better to do at this time of morning.

Customer: Well (laughing) You see...

I hung up the phone. The phone rang again immediately.

Me: Hello!

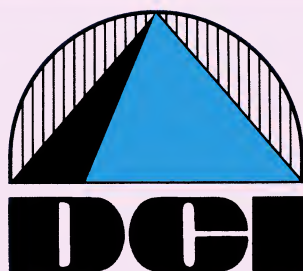
Customer: Jorge said...

Me: Hey man, look I know Jorge and he wouldn't play this kind of game on me, ok! So don't call me back.

The next morning Jorge came by to see me. And luckily for me he had a sense of humor. The story was true. See, this was a Rolls Royce armored and bullet proof car. This was something you would expect to see in a James Bond Movie, not in real life. Anyway, what happened was that a fuse had blown and apparently when this fuse blows the car protects its passengers from any kind of attack by locking itself so that you cannot open the car neither from the outside nor the inside.

So Jorge was literally trapped inside the car. Eventually he found the fuse box and replaced the blown fuse. Both Jorge and I were really upset but as soon as soon as we started to talk about the incident, we realized how funny the situation was and laughed for hours. This happened about 10 years ago. Still today when I see Jorge and we talk about it, we

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laugh for a long while.

Martin Martinez
Florida

When people ask me what I do, I tell them to make ends meet, I am a locksmith. A very interesting trade. I like to open locked things. Cars, houses, safes and a host of other things. On one particular occasion I was called to repair a lock on a door facing the beautiful and serene waters of picturesque Puget Sound.

The hotel was a nice place, pretty swank and fancy. When I arrived the manager showed me the door in question which was in the banquet room. The room was obviously set up for a big to-do with gold name tags in front of each chair at the long banquet tables. The decor of the room was that of some special occasion.

The only thing that looked out of place was the ugliest tree I've ever seen precariously placed in the corner right next to the door in question. Make no mistake about it, this tree was so ugly that it hurt to look at it. It's poorly silver painted branches proudly displayed more name tags and other hideous decorations

as its foliage. The manager pointed to the door behind this aberration and said with an authoritative voice: "Just watch out for the tree." I carefully slipped in behind the tree to the door, being cautious not to touch it for fear of catching some strange disease.

I began my work. I first had to open the door. It was at that precise moment that God caused a great wind gust through the door, blowing the name tags and other unsightly decorations all over the room. The tree began to totter and started to make it's way to the floor. A split second of indecision gripped me, but I reached out and grabbed hold of the monstrosity saving it from certain death.

The manager who was almost in a state of shock, blurted out a desperate obscenity and ran over to rescue the tree as Superman would have reacted to someone falling off a ten story building.

I told him I had to have the door open to repair the lock, so he stood there and held the tree while he watched all of his hard work with the decorations being blown all over the place, until my job was quickly executed.

When the door was finally shut, he propped the ugly stick back up so it could proudly testify to it's ugliness. He then set to picking up all the name tags and other ill-made decorations, looking much

more ruffled than the tree.

It was to be the most difficult event in the history of my life, as anyone know, to subdue uncontrollable laughter. But I feel pretty good now, the manager isn't around and I can laugh all I want.

Leonard Galley
Washington

I was called out one Saturday afternoon to open a ground floor flat front door. What had happened was that the tenant was in the bath and had heard an excited shout on the tennis court outside the flat. Her husband was playing a game of tennis, so she hopped out of the bath, wrapped a towel around herself and ran out of the flat.

Subsequently, the door slammed shut and she was locked out of the flat with only a towel on. After I opened the door, she was one embarrassed lady.

On another occasion, I got called to open a toilet door that had jammed shut. The family was eating supper when the son-in-law excused himself. They only realized that he had not returned after they had finished their dessert. I opened the door and we found him on the toilet, half way through a novel.

Allan Gardson
South Africa



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Distributor's Offer Value

"Your one stop shopping allows you the greatest depth and breadth of product mix, at reduced purchasing costs to you."



by Patricia Lilly

Do you need to...Increase turnover? Manage assets more profitably? Cut paperwork? Increase market impact? If you answered yes to any of these questions, then now is the time to lock in with your most important marketing partner—your distributor.

The locksmith distributor exists to anticipate and satisfy your needs in the marketplace. Let's examine the key value-added services you can expect from your distributor.

Buying power: When partnered with a distributor, your buying clout increases. In the simplest of terms, your distributor acts as a purchasing agent on your behalf. He buys in large quantities for a variety of customers thereby cutting the costs of dealing directly with a vendor. Dealing with one distributor eliminates the time and cost of negotiating with hundreds of vendors, as well as reams of paper associated with buying from more than one source.

Your "one stop shopping" allows you the greatest depth and breadth of

product mix, at reduced purchasing costs to you, allowing you to pass those savings along to your customer. Isn't that what your business is all about? Providing the right product at the right price.

On-time delivery. Locksmith distributors stock thousands of items ready to move when you need them. As a matter of fact, the average distributor inventories more than 11,000 items in his distribution center. With delivery costs continually rising, you must take every possible opportunity available to you to keep costs to a minimum. Your distributor, the inventory and delivery specialist, offers quick reaction on restocking and high demand items. You can better plan your product mix and improve your turnover for an improved profit picture. Quick distributor shipments reduce your storage requirements allowing for greater active selling space.

Marketing merchandise assistance. Your distributor stands ready to assist you with merchandising techniques and marketing assistance: Sales seminars offer the chance to hone your selling skills. Service training programs provide the technical expertise necessary to maintain your image as the security specialist. In-house dealer shows keep you abreast of

the latest product and development news in the industry. Financial management training will help you better manage your assets and increase your profitability. Advertising co-op programs can help you position your niche in your community; the list goes on and on.

Because your distributor sells to so many different customers, he is the most up-to-date resource you have on industry trends. He can build a complete profile of the industry based upon the information his salesmen pick up in the field.

Why not call upon your local distributor today to explore the variety value-added services available. Take advantage of the best and most sophisticated tools to help you penetrate your market successfully.

Discover what your distributor can do for you. Call your local distributor or the National Locksmith Suppliers Association (NLSA). NLSA represents more than 150 distributors and manufacturers in the lock supply industry. The association has developed dealer education programs designed to enhance your selling skills, merchandising and store layout. If you would like to know more about these programs or further details on distribution, contact NLSA at 215-564-3484.

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The National Locksmith Suppliers Association held their 21st Annual Membership Conference in Lake Buena Vista, Florida at the Walt Disney World Swan in May.

Nearly 300 distributors and manufacturers of locksmith supplies attended this annual industry event, making it the highest attendance recorded. Highlighting this week long conference along with business sessions, were the increasingly important individual manufacturer/distributor conferences.

Kicking off the conference was a full-day seminar with John P. Flanagan of Cabot Safety Corporation addressing the topic of "Unmasking the Mystique of Proper Inventory Management." General Sessions during the Conference included two important topics in today's competitive business environment: Anti-Trust Laws and Distributor/Manufacturer relations. S. Gordon Elkins, Esq. of Stradley, Ronon, Stevens & Young in Philadelphia presented key guidelines to avoid Anti-Trust violations during his presentation, "Everything You Always Wanted to Know About Anti-Trust Law... But Were Afraid to Ask"; and John Monoky and Associates of Toledo, Ohio covered the topic of "Partnership Marketing: Nurturing the Distributor/Manufacturer Relationship," leading the group in lively round table



NLSA attendees scheduling appointments.

discussions at the close.

In a unique opportunity to meet with top management of 56 different companies in one location, distributors and manufacturers conducted individual conferences Thursday through Saturday.

After entertainment in "the Disney tradition" with several Disney characters on the opening night of the Conference, NLSA members entered a Caribbean Paradise on Friday, May 3. A tropical smorgasbord was served beneath the stars, and members relaxed to beat of an island steel drum band.

The National Locksmith Supplier Association represents 77 distributors and 80 manufacturers of locks and locksmith supplies throughout the U.S. and Canada.

Leon Wolfley, President of Island Pacific Distributors Inc. in Honolulu, Hawaii was elected President of the National Locksmith Suppliers Association during the Annual Conference.



Howard Johnson passes gavel to Leon Wolfley.

During the Joint Industry Luncheon on Thursday, May 2, 1991, a ceremonial passing of the gavel took place as former President, Howard Johnson of Hans Johnson Company, welcomed Mr. Wolfley to his new position before stepping down. Mr. Johnson was then thanked by Mr. Wolfley, on behalf of the entire Association Membership, for his years of service to NLSA. As a symbol of their appreciation, the association presented Mr. Johnson with a hand embossed plaque as well as an engraved Cross pen and pencil desk set.

Alex Ebrahimzadeh, President of Fried Brothers, Inc. in Philadelphia, Pennsylvania will serve as Vice President. Elected as Secretary/Treasurer was Don R. Bradford, President of Fairway Supply Inc. in Dallas, Texas.

The author is Executive Director of NLSA.



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Beginner's Corner

Rekeying Kwikset



by Eugene Gentry

It is possible that one of the first residential entry locks the apprentice or new locksmith will be called on to rekey will be a Kwikset 400 entry lockset. It is also possible that above that lockset on the door, will be a Kwikset 600 deadlock, sometimes keyed alike to the 400 entry lockset.

Following, is a discussion of the methods I use to rekey these locks. I fall in the category of an apprentice locksmith, so I consulted with a professional locksmith to make sure that methods that work for me would be the ones used by a professional.

First, check to see if the lock is working properly with the original key. This is important as the homeowner will blame you if the new key does not work correctly. Proceed to remove the two Phillips head bolts on the back side of the door, then pull the back knob off. Depress the latch and pull the front knob out of the hole.

To be able to remove the lock from the knob, first turn the round spindle, lining up the boss with the slot. Use the round end of the cylinder removing tool to push in on detent at the side while pointing the spindle downward. The spindle will fall out. (See photograph 1.)

Next, use the "V" shaped end of the cylinder removing tool, pushing it down the middle of the trough into the hole where the spindle is located. Push until the cylinder retaining springs are pinched together, releasing the cylinder. This is where I occasionally have trouble. You can't see what the end of the cylinder tool is doing. The professional pops the cylinder out in a second, where as I have to push several times to get it out. (See photograph 2.)

Once the cylinder is out, use the "V" end of the removing tool to push up on the retaining "C" ring at the rear of the plug. A small screwdriver at the top will pry the ring off. (See photograph 3.)

Older and worn locksets are a problem,



1. Using the cylinder removing tool to remove the lock from the knob.

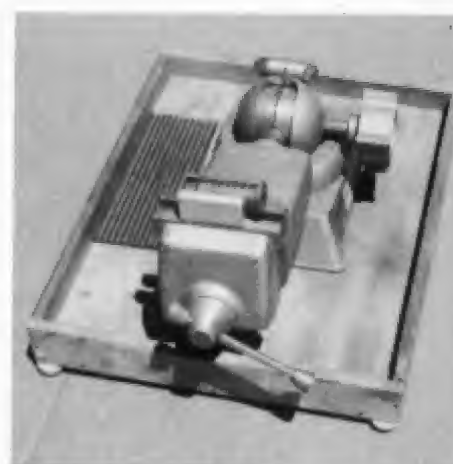


2. Popping the cylinder out.



3. The plug and "C" ring removed from the cylinder.

so I proceed now by prying the cap off with a small screwdriver, then dump all the pins and springs in a tray. All bad looking springs and top pins are removed. The professional tells me that he does not dump the pins, but uses a plug follower to remove the plug. He then turns the plug upside down, and, removing the plug follower



4. A small vise with a tray for easy pin recovery.

slowly, checks each top pin for wear, and good bounce.

Now you are ready to rekey. Take a pre-cut key and decode it, or cut one on your code machine if you have one. The one I am using is a 4-5-3-3-5. I put the plug in the vise plug holder to ready it for reloading the pins. The chart for Kwikset on the pinning kit is read and it tells me that 4 is .240, 5 is .265, 3 is .220, 3 is .220 and 5 is .265. The pins are loaded in the plug. I use a small vise with a tray, so if any pins are dropped they are easy to recover. (See photograph 4.)

Replace the plug in the cylinder, and put the "C" ring back on. The professional suggests using a new "C" ring. If you have dumped all the pins, load the top pins and springs, and put on a new cap. Now try the new key to see that it works properly. If everything is in order, snap the cylinder back into the knob, making sure the keyway is turned the right direction.

When you try to install the knob back on the door you may find that short bolts were used and you have trouble finding the holes where they fit. Carry some longer bolts in your tool box.

Above the doorknob you may find a 660 single cylinder deadlock or a 665 double cylinder deadlock. Here are the steps to rekey these.

Remove the two bolts at the rear side, and pull the turnpiece off. Pull the front of the deadlock off. The cylinder will slip out of rosette ring, exposing the back side of the

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The Lighter Side

Convention Time!



by Sara Probasco

Here it is, July again. Time to display your red, white, and blues and start packing the old coffee pot and pillow for this year's ALOA convention.

Last year, Don and I tried to cut down on the amount of junk we carried, and it was a disaster. At least, this year, we don't have to wonder what kind of clothes to wear. I understand every one dresses for casual comfort in sunny, southern California.

I enjoy conventions. Coming from a small town, that's about the only time I get to experience luxury hotels. Interesting things happen there.

I'll never forget the first time we attended a convention at an airport hotel. Our room was above the clouds, so it was very difficult to examine the weather, outside. I nearly wore out my umbrella, taking it with me on sun-blessed excursions, because I kept hearing the rumble of thunder. Four days passed before I looked out my window expecting to see lightning and discovered that the sound of commercial jets circling around us.

At another convention, I came blithely walking down the corridor one morning, all set to interview some locksmiths before classes began, and noticed a lighted panel beside the elevator door flashing red. "FIRE WARNING," it flashed. "DO NOT USE ELEVATOR." Now, that's all well and good, I thought, but how else do you think I'm going to get from the fifty-seventh floor to the lobby?

I glanced around to see a man laying a new section of carpet down a neighboring corridor.

"Excuse me," I said. "Do you know if something is wrong with this elevator?"

Looking up at the flashing panel, he said. "Looks like it. Says not to use it."

"I can see that," I replied. "Has there been an alarm sounded?"

"Not that I know of, although I did hear a bunch of fire trucks, a few minutes ago. Must have been something on a lower floor. I haven't seen anything up here." He went on with his work.

All I could think of was *The Towering Inferno*. In my imagination, smoke began to seep beneath the doors. The elevator shaft was, no doubt, filled with lethal fumes, and the stairwells had been blasted away, by now, I felt sure. There was no hope for us, up here above the clouds. Oh, why hadn't we stopped at the Buck-a-Night Inn, where the highest room number was two sixty-two?

"What can we do?" I asked, distraught.

The man shrugged. "I guess you'll have to use the stairs."

"Fifty-seven flights?"

"Well," he grinned, "at least it's downhill."

Returning to my room with that cheerful thought in mind, I decided to call the desk and inquire about the situation before draping myself in wet sheets. I was told the alarm was false, that someone's cigarette had set fire to papers in a waste basket, triggering the smoke alarm, but that it was entirely contained and nothing to worry about. By the time I reached the elevators again, the lights had stopped flashing and the repairmen were gone. I stayed downstairs most of that day, just to be safe.

Another interesting encounter with fire alarms occurred at the Texas Locksmith Association convention, in Austin. As several locksmiths had brought cellular telephones into the hotel, a warning had been issued discouraging the use of such units inside the building, especially near the fire alarm system, for fear of setting it off. Hotel personnel had even pointed out the potential sources of trouble beneath the overhanging ceiling which surrounded the open-concept lobby.

Confident that he was well away from the problem area, one locksmith pointed his antenna toward the lofty ceiling and

proceeded to dial. Suddenly bells and sirens began to sound. Lights flashed, and the enormous exhaust fans clicked into action, shaking the building with a rumbling suction of air as if a flying saucer was trying to beam us up through the roof.

By the time a convoy of screaming fire trucks arrived, security guards had swarmed around the astonished perpetrator and herded him into the manager's office for interrogation. He was later released, red-faced and minus his cellular telephone.

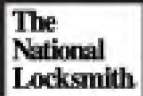
Of course, with details being told and retold throughout the day, by "happy hour" that evening, the facts had become somewhat distorted.

"Alarms were going off everywhere." I heard one locksmith telling his awe-struck audience. "They musta thought he was trying to take hostages, or something. You could hear SWAT team helicopters landing on the roof, and everybody was running for cover. There this guy stood, in the middle of the deserted lobby." He acted out the scenario. "His arms were raised over his head, this cellular phone clutched in one hand like a hand grenade. The cops started closing in, their pistols ready.

"**'We've got you surrounded,'** one of them hollered through his bull horn. 'Just put it down slow, now. No sudden movements.' Man, it was exciting. Just like in the movies. You should have been there."

Not every comedic convention situation creates such a commotion. Some humor is more subtle. Like the cost of a recent breakfast: \$9.95 (plus tip and tax) for one poached egg, a small grapefruit juice, and coffee. Now that was hilarious. Of course, when you consider that the coffee, alone, was \$2.50, the rest falls into place.

I begin to understand why some international travelers carry a sack of fruit and a chicken wherever they go. Now, there's an idea. I'll bet if I left out my hot rollers, I could squeeze the chicken and potato salad in between the coffee pot and my pillow, and Don would never know until we got there. §



Meilink Safes

"A final advantage of domestic production that is of great interest is a reduction in the dealer price of many Meilink safes and vaults."

One of the leading manufacturers of security products has taken a major step in assuring quality production and high dealer service standards for its line of fireproof safes and vaults. Meilink Industries, Inc., headquartered in Whitehouse, Ohio, has announced it will now manufacture all safe products in its United States facility.

This development will be especially important for the professional locksmith, according to Ed Palisin, company President and C.E.O. "Our segment of the American security marketplace has become fragmented," he observed. "The market is being flooded with imports, and most of these products are sold strictly by price. Such a marketing approach can only help the discounters or the major catalog houses; the independent locksmith or office products dealer usually cannot compete by selling price only. Instead value-added service—taking that extra step to solve a customer problem or satisfy a customer need—is what will increase his or her customer base and sales. By returning our manufacturing to the U.S., we believe we will be better able to assist smaller dealers in improving their customer service and at the same time offer a value-added product they can sell."

Customer service goes far beyond solving an immediate customer problem, Mr. Palisin noted. Instead it can involve a large combination of interrelated factors. "A reputation for excellent customer service is one of the most important assets a company can have. A professional locksmith builds his or her business upon customer satisfaction. The same is true for suppliers. After several years of outsourcing our vaults and safes, we discovered that the many variables caused by importing products made maintaining that necessary high level of customer and supplier satisfaction difficult."

One of the most important variables is, understandably, product quality. Meilink data safes were previously manufactured in Sweden, their record safes in Japan. "Having operations so geographically



Meilink's record safe

remote made it nearly impossible to assure the type of quality control we can achieve by manufacturing the products ourselves." The products they imported were not necessarily inferior, he added. "But since we've consolidated our manufacturing, both dealers and customers can have even more confidence that the Meilink products they order will satisfy them for years to come."

Another important benefit of domestic production is the uniformity of U.L. classifications for fireproof vaults and safes. "All of the imported products carry various classifications which are determined by the



The Meilink data safe.

country of manufacture. The end user and locksmith confusion was very detrimental."

Since returning production to the U.S., Meilink had redesigned its product line, and is now offering 51 different home and office safes and vaults, record safes, data safes and composite safes. They are available in one and two hour rated models, and include such popular features as day locks, relockers, numerous security factors, and chrome hardware. Models can be ordered in charcoal gray or Gray Value I textured finishes.

Maintaining manufacturing control also improves Meilink's capability for customization—a factor especially important for American safe purchasers. "Most end-users want their safes configured a specific way internally. With overseas manufacturing, there is a long and inevitable delay between placing an order, manufacturing it to customer specifications, and then shipping the finished product back to the U.S. and the end-user. Also, unpacking and reworking a finished unit was economically unfeasible. We can now more easily tailor our domestic production to anticipated demand, and complete the order for a customized safe or vault more rapidly."

There remains one final advantage of domestic production which should be of particular interest to the professional locksmith—a reduction in the dealer price for many Meilink safes and vaults. "No longer do we have to add the extra cost of importing to our base price. We can also manufacture more efficiently in many instances. We will be passing on these savings to our customers immediately," Mr. Palisin promised.

"Meilink has always supplied the most complete line of fireproof safes and files available," he concluded. "Now that all our manufacturing is once again back home in the U.S.A., we can provide even more quality products, marketing support and other services to our customers, and be better able to assist the independent locksmith in competing successfully with the discounters." §

Multi Lock Gate Security

"The lock is completely non-ferrous, meaning it will not rust or be subject to corrosion. This means no call-backs to fix rusted locks."

by Jack Roberts

Commercial, industrial, institutional accounts, as well as ornamental iron gate installations present many challenges for the locksmith. In a commercial building, various areas of numerous departments will need to be secured. Supplies, parts, and tool cribs are often located in a large area with each section divided from another by wire mesh partitions manufactured particularly for secure storage in an open area. In these cases, a specialized gate lock will be needed.

Sometimes the area to be secured is in an exposed location where the lock will be subject to the forces of mother nature. The lock we will discuss here is completely non-ferrous, meaning it will not rust or be subject to corrosion. This means no call-backs to fix rusted locks.

The Multi Lock (see photograph 1) was designed to meet requirements for the above types of security needs. In many cases, it is furnished by the manufacturer of the partitions with the lock function set to the type of opening involved, either hinge or slide. Some clarification of terminology should be made at this point since the terms used could be confusing.

Many of us in the locksmithing industry refer to a hinged gate of this type as a "slammer" as in slamming a door or in jailhouse terms as being thrown in the slammer. Multi Lock refers to this as a "hinge" type. Regardless of the name used, this type function uses a hinge bolt.

Due to space requirements, many storage units of this type require a sliding gate in which case the function becomes "slide" and the hinge bolt is replaced with a hooked slide latch. A slider, of course, means a sliding gate.

The slim profile of the Multi Lock is achieved by a "dished" recess in the die cast aluminum case cover (see photograph 2), and the use of a 15/16 mortise cylinder in the lock case. Regardless of the function, hinge or



1. The Multi Lock gate lock.



2. The dished recess in the case cover creates a slim profile.



3. Side view of the lock case.

slide, the overall standard case thickness is only 1-5/16". For double cylinder applications the total case thickness is 1-3/4". (See photograph 3.) (The latch has been removed for clarity.)

Simplicity seems to be the major design feature of the Multi Lock since there are only eleven parts for the standard lock including the four case cover screws. (See photograph 4.)



4. Parts of the Multi Lock (from top to bottom: 1-5/16" mortise cylinder, mortise cylinder ring nut, knurled knob, latch bolt, coil spring, knob lever, cover screws and sprocket dog).

(Thirteen if you include the case and cover.) More than sixty different functions or combinations, however, can be assembled from the stock parts available. This versatility enables the locksmith to service those accounts who move, rearrange or otherwise change the "cage" from its original configuration.

Photograph five shows the interior of the lock case and the elementary design which makes hand change for either bolt, slide or slammer, an easy

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5. Lock case interior.

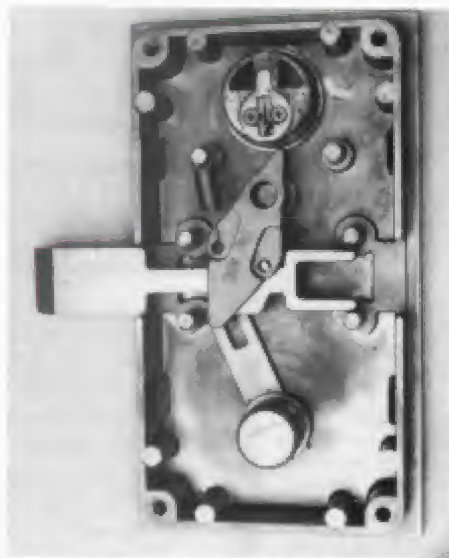
task. Photograph six shows the unit assembled for a left hand reverse bevel latch or slammer. Photograph seven is the same unit assembled for a LHRB slider.

Hand change of either bolt is quickly accomplished by removing the back cover, removing the actuator spring, lifting the diamond shaped sprocket dog off its mounting post and reversing the bolt. The sprocket dog is replaced, the actuator spring re-attached and the back cover put back into position. You can't get much easier than that.

The mortise cylinder slips into the case cavity and is held in position by projections or lugs on each side of the hole which fit into the grooves normally used by the cylinder set screw. The mortise cylinder ring nut screws on from the back of the cylinder to firmly hold the cylinder in place.

A neat feature of the Multi Lock is that rekeying can be done without removing the cylinder. Just remove the case cover, lift out the knob, knob lever, sprocket dog, spring and bolt. Remove the AR cam and follow the plug right out of the cylinder. (See photograph 8.) Reassemble in reverse order and reinstall the lock on the gate.

Although the knurled interior knob has been standard on this lock for many years, requests from users occasioned the development of three other means of egress. A standard brass doorknob, a "T" handle and, to meet OSHA requirements where necessary, an "L" handle is available. Any of these may replace the standard knurled knob quickly and easily by removing the case cover and installing the necessary



6. Unit assembled for a left hand slammer.



7. Unit assembled for a LHRB slider.



8. Rekeying without removing the cylinder.

handle adaptor. The case cover is replaced and the selected knob or handle is installed.

The knurled knob is usually the only means of egress from a slider due to space limitations however a slide stop, (see photograph 9) may be installed if management or OSHA requires a knob,



9. Slide stop.

"T" or "L" handle.

Various types of latch guards may be used for hinge type gates to prevent "loiding" but the Multi Lock Slide Latch Keeper (see photograph 10), is designed to prevent even the most serious attempts at unauthorized entry.



10. Multi Lock slide latch keeper.

Management requests for double cylinder installations or conversions can be easily solved by replacing the standard case cover and knob lever with the double cylinder case cover and the angled fork lever. (See photograph 11.)



11. Double cylinder case cover and angled fork lever.

Latch and hook bolts may be ordered

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Masterkeying Options

"We must select among the various masterkeying options to determine which will best satisfy the needs of our system."



by Don O'Shall

Masterkeying, when properly applied, balances security with convenience, providing the best of both. In order to do this we must maintain the physical integrity of the lock cylinder as much as possible, while at the same time allowing users to move within the system in an easy, orderly manner, able to go only where they are authorized to go.

To do this, we must select among various masterkeying options to determine which will best satisfy the needs of our system.

This means that we must have a firm understanding of the options that are available, including those that are less often used.

These options can be divided into four types: Display Styles; Methods; Formats; Progression Sequences.

The display styles are largely based on the teaching style used to develop the system. By far, the most popular is the block style, because it shows the relationship between various keys in the system and the masterkey levels (typically eight levels) associated with them. (See illustration 1.)

The next most popular display style is the sequential list style. In effect, this is a variation of the Block display, but with fewer masterkey levels shown (typically three levels.) (See illustration 2.)

The third most popular display style is the Matrix display, where a chart shows the majority of the system in a sort of shorthand form. (See illustration 3.)

The fourth display style is the randomized list. This is common on factory systems, where the system is developed using one of the other display styles, and then randomized for a list to the end user for less telegraphing of how the system was developed. (See illustration 4.)

Methods and formats on the other hand relate more directly to the cut combinations generated for the masterkey system. In a masterkey system, all the keys are related to each other and to the master key. This relationship allows the system to work, with a specific job assigned to each key.

These relationships all begin with the highest level of masterkey available in the system (even though this may well not be the one actually used). This is because there are many ways that change keys can be related to each other, but there are only three ways that they can relate to the highest master key:

Possibility One: None of the change keys has the same depth of cut in the same position as any of the cuts on the highest master key.

Example: Master 35241
 53423 53623 57423 57623
 53425 53625 57425 57625
 53427 53627 57427 57627

53463 53663 57463 57463
 53465 53665 57465 57665
 53467 53667 57467 57667

Note that none of the change keys has a #3 in the first position, a #5 in the second position, a #2 in the third, a #4 in the fourth or a #1 in the fifth. This method is total position progression or as it is commonly known, the simple progression method.

Possibility Two: The change keys have certain positions where all of the change keys have the same cut as the highest master key.

Example: Master 35241
 35423 35623 35823
 35425 35625 35825
 35427 35627 35827

35463 35663 35863
 35465 35665 35865
 35467 35667 35867

Note that all of the change keys have a #3 and a #5 in the first and second positions respectively, as does the highest master key, but none of them has a #2 in the third, a #4 in the fourth, or a #1 in the fifth. This method is known as the partial progression method.

Possibility Three: Each of the change keys has a certain number of cut depths in common with the highest master key, although exactly which cuts they are varies from change key to change key.

Example: Master 35241
 35243 35221 35441 31241 15241
 35245 35261 35641 35241 55241
 35247 35281 35841 37241 75241

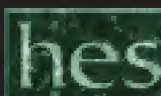
Note that all of the change keys in this example have exactly four cuts in common with the highest master key, but in the first column they are the first four from the left with the differences appearing in the far right position, while in the second column it is the second from the right that differs, and in the third column it is the middle position, etc. This method is the hold and vary method.

There is actually a fourth method, called positional masterkeying, but this is actually more a method of pinning the cylinders rather than generating the system. It can use any of the other methods to develop, but is accomplished by the emptying of complete chambers in the cylinder. Obviously this is not for standard locks, but works rather well with Schlage Wafer Locks and Kaba High Security multiple pin tumblers and similar devices.

By the format, we mean how many increments of difference we will use as a minimum between change keys, or between the highest master key in the system and any of the change keys in a progressed position (a position where change keys differ from the highest master key in the system). There are six basic formats available to us in master keying:

Single increment progression: A single increment of difference as a minimum between master and change keys, and between change keys. (Commonly used by Kwikset, Medeco High Security, Corbin

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Change Keys			
102121	102521	102721	102921
102123	102523	102723	102923
102127	102527	102727	102927
102129	102529	102729	102929
102125	102525	102725	102925
BLOCK	BLOCK	BLOCK	BLOCK
102141	102541	102741	102941
102143	102543	102743	102943
102147	102547	102747	102947
102149	102549	102749	102949
102145	102545	102745	102945
BLOCK	BLOCK	BLOCK	BLOCK
102161	102561	102761	102961
102163	102563	102763	102963
102167	102567	102767	102967
102169	102569	102769	102969
102165	102565	102765	102965
BLOCK	BLOCK	BLOCK	BLOCK

Illustration 1. A block display.

BITTING	BITTING
100789	321010
102121	541010
102123	321218
102127	743010
102129	523438
102141	521430
102143	
102147	

Illustration 2
List display.

Illustration 4
Randomized display

3 5 7 9	21	3	5	1 3 5
------------------	----	---	---	-------------

Illustration 3. A matrix display.

and Russwin System 70 and Corbin and Russwin Interlocking Pin High Security.)

Master: 548210

Change Keys: 657121 657122

Limited one step progression: A single increment of difference as the minimum between change keys, but with a two increment difference minimum between change keys in the system. (Commonly used by Best A3.)

Master: 548210

Change Keys: 326432 326433

Two increment drop progression: (Also called two step progression) A two increment minimum difference between the master and change keys, and between change keys. (Used by most manufacturers and locksmiths.)

Master: 548210

Change Keys: 326032 326034

Three increment drop progression: (Also called three step progression.) A three increment minimum difference between the master and change keys, and between change keys. (Used by Weiser/Falcon for non-interchangeable core locks frequently.)

Master: 548210

Change Keys: 215543 215546

Limited three step progression: A three increment minimum difference between change keys and the master key, but only a two increment difference between change keys. (Used occasionally by Best A3 and useful for systems with worn plugs to improve security.)

Master: 548210

Change Keys: 215543 215545

Split format progression: Any combination of the above formats with one format used in one or more positions and the remaining positions in one or more different formats. (This is exceptionally rare, but useful in situations where a particular position or positions has been butchered by someone with a file, but the lock cylinder and plug overall are healthy—not recommended for less experienced Masterkeying Locksmiths.)

Master: 548210

Change Keys: 335531 333832

It should be obvious that the larger the increments of difference used by the format, the more physically secure the lock cylinder will be, but the fewer the combinations that will be available.

Likewise, the Partial Progression method provides more physical integrity within each lock cylinder, but provides fewer combinations than the Simple Progression method.

The Hold and Vary method, on the other hand, provides equal physical integrity within each lock cylinder to the Partial Progression method, while at the same time drastically increasing the number of possible combinations provided within the system. However, this is somewhat offset by the difficulties experienced in evaluating various masterkey levels and the change keys each can operate.

In addition to method, format and display style there is also progression sequence to be considered. This refers to the order in which the changes occur from position to position, or perhaps is more accurately described as which positions follow each other in frequency of changes occurring within the progression.

There are basically three possibilities here: Left, right, and random. Left goes in order from left to right, while right goes in order from right to left. Random, on the other hand, starts out at one position, and then chooses the next position to progress from the remaining ones. The sequence, once chosen will remain standard throughout the system.

Some people mistake teaching styles for methods. A common example of this is to call the Matrix Display Style and the system generated by it by the Hold and Vary name (also called Rotating Constant). Yet the system created by it is either a simple progression system or a partial progression system.

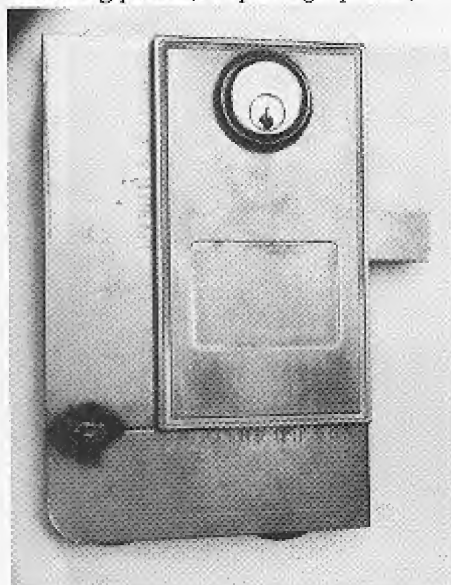
A firm understanding of the options is a must in professional Masterkeying, and especially when using a computer to generate the combinations, since most of the computerized masterkeying systems on the market either rely entirely on your knowledge of masterkeying and the options, or severely limit your options. Few indeed offer any real guidance in selecting appropriate options to apply, and nearly all will permit you to over-ride any advice they give you. The professional knowledge must always be provided by you. §

Multi Lock

Continued from page 148

in various lengths as required for almost any application. There are five latch bolts available ranging in projection from 1.125" to 1.875", and four hook bolts with hook gaps of 0.828" to 1.578".

Mounting hardware for the Multi Lock has been designed for any desired application of the unit for "cage" type storage areas. Cutting and welding are not a prerequisite for the installation. The lock case can be drilled and tapped and bolted into place for a simple installation. With the standard mounting plate attached to a gate the Multi Lock "clamps" into position when the case cover is attached to the case. The groove formed by the case and cover when assembled, fits snugly onto the mounting plate. (See photograph 12.)



12. The case and cover of the Multi Lock properly fit into the mounting plate.

All parts can be ordered individually for replacement or for adapting the lock to a different function or operation. A complete parts and price list is included with each lock or may be requested from the company.

The Multi Lock is easily serviced, can be adapted to many indoor or outdoor security applications, and offers additional income opportunities for the aggressive locksmith. Look for it on your next walk-through of a factory or warehouse or adapt it to ornamental or chain link gate applications, such as pools, tennis courts, etc.

For more information contact: Multi Lock, Inc., P.O. Box 3148, Marathon Shores, FL 33052, (305) 743-2328, or fax (305) 743-2703. §

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Business Briefs

Kenneth Lussier Runs For ALOA President

Kenneth R. Lussier, CPL, has announced his candidacy for the office of President of the Associated Locksmiths of America, Inc. Lussier has been a member of ALOA since 1970. He was elected to the ALOA Board of Directors at the 1985 ALOA Convention in Los Angeles. Since 1989, he has been ALOA's Southwest Vice President. He was named ALOA Convention Chairman for the 1990 and 1991 Convention and Trade Shows. He also served as President of the California Locksmiths Association (CLA) in 1978 and 1979. CLA named him as their Man of the Year in 1976.



Lussier owns and operates Ken's Locksmithery, with three retail locations in Southern California: Corona, Fountain Valley and Huntington Beach. His own business success led to the development of a course, "Sales and Marketing for the Locksmith," which he has presented as a full-day class at the ALOA Convention, CLA shows and local ALOA chapters.

Lussier's reputation as a leader who sincerely cares about his members, and his willingness to help others develop their own personal and business success, have helped to make him well regarded and respected in the locksmithing industry.

The elections for ALOA's Board of Directors, including President, Regional Vice-Presidents, and Board positions, will be conducted at the ALOA Membership Meeting, July 19, 1991, during the ALOA 1991 Convention and Tradeshow.

Hank Printz Runs For ALOA President

The Board of the Associated Locksmiths of America (ALOA) announces the nomination of Henry (Hank) Printz, CML for President.

Hank has been in the locksmithing industry since 1968, and is Vice President and Co-owner of Cy Drake Locksmiths, Inc. Cy Drake Locksmiths Inc., is a full service locksmith with 15 employees located in Morristown, NJ.

Hank has been active in locksmith associations since 1973. He has served



as Vice President of the North Jersey Master Locksmith Association and as Secretary, Vice President, and two terms as President of the Master Locksmith Association of New Jersey. The MLA of NJ named him Man of the Year in 1979. He is also member of South Jersey Locksmiths Association, Penn-Ohio Locksmiths Association, Texas Locksmith Association and an ALOA member since 1971.

Hank has taught basic electric/low voltage wiring classes for ALOA and various associations. Having served on the ALOA Board of Directors since November, 1982 he is currently Northeast Vice President. Hank has served on all ALOA committees and has chaired several including Finance Committee under the last two Presidents.

Hank brings a good knowledge of association affairs and strong leadership to the Association, and with a large majority of the ALOA Board supporting him is looking forward to a productive two years.

Brooks Announces ALOA Candidacy

Dallas C. Brooks, has announced his candidacy for the office of Southwest Regional Vice President of the Associated Locksmiths of America, Inc.

Dallas has been a member of ALOA since 1984. He helped start the ALOA-Heart of Dixie Chapter in Alabama in 1987. He served the first two years as it's Vice-Chairman and is currently serving as Chairman. He has worked hard to promote membership in the ALOA Chapter and to bring the best educational opportunities possible to the Alabama locksmiths.

He served in Vietnam for two years, 1967 and 1968, in the Navy SeaBees. He graduated from Auburn University-Montgomery with a B.S. Degree in Education in 1972. He taught in the public school system for one year before going to work for a locksmith shop, where his father had worked most of his life. He managed this shop for nine years before starting his own business, American Lock & Key, Inc., in 1984. His locksmith business now has two locations, Auburn and Montgomery, Alabama.

Dallas is known as a leader in his local chapter that believes in promoting professionalism in the locksmith industry. He believes the best way to achieve this is by working through a strong association such as ALOA.

Abloy Appoints Baker Nat'l. Sales Manager

Brian J. Baker has been appointed National Sales Manager by Abloy Security, Inc. for distributor, dealer, and OEM Sales of the Abloy Maximum Security and AWI cylinder product lines. Baker joins Abloy after eight years as National Sales Manager for ESP Corporation.



Letters

Continued from page 11

agencies. The police do have legitimate need for these tools. Especially the crime lab units who need to gain entry to autos, desks, cash boxes, etc. to obtain contraband and evidence for various crimes.

On the subject of police opening cars. If this is your major source of income, I feel sorry for you. For some departments, especially smaller communities, this is a community relations function. If an officer wants to stand in 20 degree below weather or in a thunderstorm opening a car, let him. I will not accept calls in very cold and rainy weather. I simply tell people I have a heavy backlog and can't do the job.

Gary C. Long
Minnesota

C.I.A. Requests Product Information

Dear Marc:

It has come to the attention of this office that security equipment manufacturers and suppliers often find it difficult to get their sales literature and technical information to the appropriate security officials of the Agency. In the hope of solving this communication gap, the following address is provided to you for dissemination to security equipment manufacturers who wish to forward product information to this Agency: The Central Intelligence Agency, Office of Security, OS/PSED, Washington, DC 20505.

Your cooperation in limiting the publication of this address to legitimate security equipment manufacturers and suppliers is appreciated.

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Technitips

Continued from page 21

locksmiths have had their share of calls involving the spring retainer preventing the ignition from being rotated. The spring retainer staking is not always sufficient to prevent the wafer springs from forcing it out of its pocket, and into either a sidebar compartment or, in the case of trunk or door locks, into the case drain.

Because of the keying scheme of the late model GM autos, it was an easy task to simply replace the ignition with a new part. The Ford ignitions, however, because of their relationship to the door locks, are not as convenient to replace. It is for this reason, that I have preferred to repair instead of replace most of the 10 cut ignitions that fail because of the spring retainer.

The rear of the Ford spring retainer is, however, a little harder to "restake" than its' GM cousin. The front of the retainer fits into a pocket for staking, but the rear of the retainer fits into a shallow dovetail groove only. To restake the rear of the spring retainer, remove the last wafer in the plug, and bend the spring retainer to fit into the wafer slot. Stake the sides and rear of the plug against to keep it securely in place. Though the repaired ignition will only have five wafers, the spring retainer is not likely to become dislodged ever again.

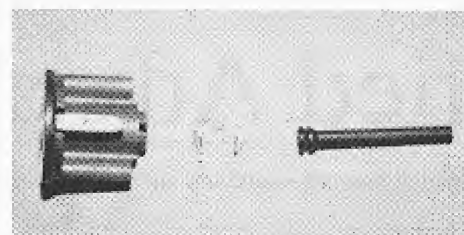
Joel Fitchner
Alabama

Editor's Note: Some parts are too small to be "economically" repairable. Ignition cylinders must necessarily fall into this category sometimes. Buy a stock of common Ford 10 wafer "uncombined" ignitions and a 10 wafer keying kit. When you have a problem with an ignition, as you have described, and you know that the manufacturer has designed it to be non-repairable, forget it and sell your customer a new ignition. There is a reasonable profit in the sale of replacement parts, when coupled with a charge for combining the ignition to fit the keying scheme of the auto. Don't waste your time repairing things that don't deserve your best efforts. Repairing "repairable" items is a business. Repairing "non-repairable" items is a hobby.

This Tip can make opening a Chrysler or GM trunk with a dislocated or broken actuator much easier.

If the trunk lock is covered by one of the decorative pieces that are commonly pop riveted over the lock cylinder, use it to your advantage. Drill the rivets to remove the decorative trim, and use the two rivet holes to access the latch mechanism. Slip an inspection light into one of the holes, and use

Continued on next page



6. Further disassembly with "C" ring removed.

Using the same new key that was for the entry lock, use the same number pins on the 660: 4-240, 5-265, 3-220, 3-220, 5-265. Put the plug back in the cylinder. Place the cylinder face down on a flat surface, holding torque blade in position, and replace "C" retaining ring. Try the new key. Put the deadlock back on the door.

When replacing the 665, double cylinder deadlock back on the door, put the exterior cylinder on first. The torque blade of the interior cylinder is inserted inside the torque blade of the exterior cylinder. Keyways should be in the down position. For greater security, you may install one-way screws.

If you are a beginning locksmith, and have ideas for what topics you would like to see me cover, send me your ideas to *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107. §

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